FILE NOTATIONS

'ntered in NID File ...✓.....
ocation Map Pinned ...✓.....
ard Indexed ...✓.....

Checked by Chief .....
Approval Letter .....
Disapproval Letter .....

COMPLETION DATA:

Date Well Completed .....
TA.....
..... OS..... PA.....

Location Inspected

State or Fee Land .....

LOGS FILED

Driller's Log.....
Electric Logs (No.) .....
E..... I..... Dual I Lat..... GR-N..... Micro.....
BHC Sonic GR..... Lat..... Mi-L.....
CBLog..... CCLog..... Others.....

Form 9-331 C
(May 1963)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] OTHER — SINGLE ZONE [ ] MULTIPLE ZONE [ ]

2. NAME OF OPERATOR: Flying Diamond Oil Corporation

3. ADDRESS OF OPERATOR: 1700 Broadway, Suite 900, Denver, Colorado 80290

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 632' FSL, 783 FEL, 4-T4S-R20E
At proposed prod. zone: same

5. LEASE DESIGNATION AND SERIAL NO.: U-36306

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NA

7. UNIT AGREEMENT NAME: NA

8. FARM OR LEASE NAME: Government-Shenandoah

9. WELL NO.: 1

10. FIELD AND POOL, OR WILDCAT: Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec 4-T4S-R20E, SLM

12. COUNTY OR PARISH: Uintah

13. STATE: Utah

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: Eight miles Northeast of Lapoint, Utan

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 632'

16. NO. OF ACRES IN LEASE: 640

17. NO. OF ACRES ASSIGNED TO THIS WELL: 640

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.:

19. PROPOSED DEPTH: 8800'

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): ~~7320'~~ Upgraded Ground 6758

22. APPROX. DATE WORK WILL START*: August 10, 1978

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17½"	13-5/8"	48 lb H-40	100'	Circ to surface 170 sx
12¼"	9-5/8"	40 lb K-55	2000'	Circ to surface 700 sx
8-3/4"	7"	23-26 lb S-95	8800'	700 sx

This application is to drill and complete a well in the Weber formation. The well is to be drilled vertically with a hole deviation of not more than 1½ degree/100.

Blowout prevention equipment will include a recording mud pit level indicator, flow meter and other warning devices on the derrick floor.

(Supplemental information attached).

Approval Noted

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED E. B. Whicker E. B. Whicker TITLE District Superintendent DATE July 10, 1978

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY (Orig. Sgd.) E. W. Guynn TITLE DISTRICT ENGINEER DATE JUL 28 1978

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side

State O & G

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

RECEIVED JUL 25 1978 DIVISION OF OIL, GAS, & MINING

1. OIL WELL [X] GAS WELL [ ] OTHER	5. LEASE DESIGNATION AND SERIAL NO.: U-36306
	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A
	7. UNIT AGREEMENT NAME: N/A
2. NAME OF OPERATOR: FLYING DIAMOND OIL CORPORATION	8. FARM OR LEASE NAME: Government-Shenandoah
3. ADDRESS OF OPERATOR: 1700 Broadway, Suite 900, Denver, Colorado 80290	9. WELL NO.: 1
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 632' FSL, 783' FEL, SEC 4-T4S-R20E	10. FIELD AND POOL, OR WILDCAT: Wildcat
	11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: SEC 4-T4S-R20E, SLM
14. PERMIT NO.	15. ELEVATIONS (Show whether DF, RT, GR, etc.): 7320' Upgraded Ground
	12. COUNTY OR PARISH: Uintah
	13. STATE: Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other)			
(Other)			[ ]	(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

Propose to drill subject well. Approval is requested to use and upgrade existing road through Sections 23, 14, and 15, Township 4 South, Range 20 East, approximately two miles in length.

APPROVED BY THE DIVISION OF OIL, GAS, AND MINING
DATE: July 31, 1978
BY: P L Driscoll

18. I hereby certify that the foregoing is true and correct

SIGNED G. K. Bailey TITLE Mgr., Drilling & Production DATE 7-19-78

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Flying Diamond Oil Corporation

1700 BROADWAY SUITE 900 DENVER, COLORADO 80290 PHONE (303) 573-6624

August 28, 1978

State of Utah - Natural Resources
Division of Oil & Gas Conservation
1588 West North Temple
Salt Lake City, Utah 84116
Attn: Pat Driscoll

RE: Government-Shenandoah #1
SEC 4-T4S-R20E
Uintah County, Utah

Dear Mr. Driscoll:

Please find attached application for Permit to Drill the subject well. Please accept our apology for not having submitted this application before now. In the confusion of NTL-6, utilization and locating rigs we neglected the preparation and submittal of the application to your office.

The well is currently drilling at 2300' and 9-5/8" casing was set and cemented at 2251'.

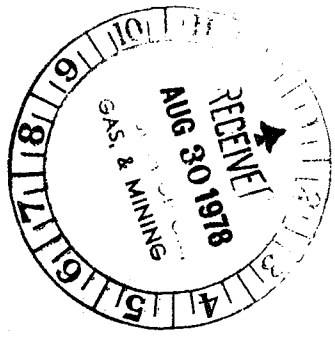
Very truly,

FLYING DIAMOND OIL CORPORATION

G. K. Bailey
Manager, Drilling & Production
Western Oil & Gas Divison

GKB/klk

Attachment



Form DOGC-1a

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL & GAS

U-36306
5. Lease Designation and Serial No.

NA
6. If Indian, Allottee or Tribe Name

NA
7. Unit Agreement Name

Government-Shenandoah
8. Farm or Lease Name

1
9. Well No.

Wildcat
10. Field and Pool, or Wildcat

Sec 4-T4S-R20E, SLM
11. Sec., T., R., M., or Blk. and Survey or Area

Uintah Utah
12. County or Parrish 13. State

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work
DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. Type of Well
Oil Well [X] Gas Well [ ] Other Single Zone [ ] Multiple Zone [ ]

2. Name of Operator
Flying Diamond Oil Corporation

3. Address of Operator
1700 Broadway, Suite 900, Denver, CO 80290

4. Location of Well (Report location clearly and in accordance with any State requirements.*)
At surface
632' FSL, 783' FEL, 4-T4S-R20E SE SE
At proposed prod. zone
same

14. Distance in miles and direction from nearest town or post office*
10 miles NW

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg. line, if any) 632'

16. No. of acres in lease 640

17. No. of acres assigned to this well 640

18. Distance from proposed location* to nearest well, drilling, completed, or applied for, on this lease, ft. NA

19. Proposed depth 8,800'

20. Rotary or cable tools Rotary

21. Elevations (Show whether DF, RT, GR, etc.)
Upgraded Ground 6758

22. Approx. date work will start*
August 16, 1978

23. PROPOSED CASING AND CEMENTING PROGRAM

Size of Hole	Size of Casing	Weight per Foot	Setting Depth	Quantity of Cement
17½"	13-5/8"	48 lb H-40	100'	Circ to surface 170 sx
12¼"	9-5/8"	40 lb K-55	2000'	Circ to surface 700 sx
8-3/4"	7"	23-26 lb S-95	8800'	700 sx

This application is to drill and complete a well in the Weber formation. The well is to be drilled vertically with a hole deviation of not more than 1½ degree/100.

Blowout prevention equipment will include a recording mud pit level indicator, flow meter and other warning devices on the derrick floor.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.
Signed G. K. Bailey Title Mgr. Drilling & Production Date 8-28-78
(This space for Federal or State office use)

Permit No. Approval Date

Approved by Title Date
Conditions of approval, if any:

RECEIVED
AUG 30 1978
DIVISION OF OIL, GAS, & MINING

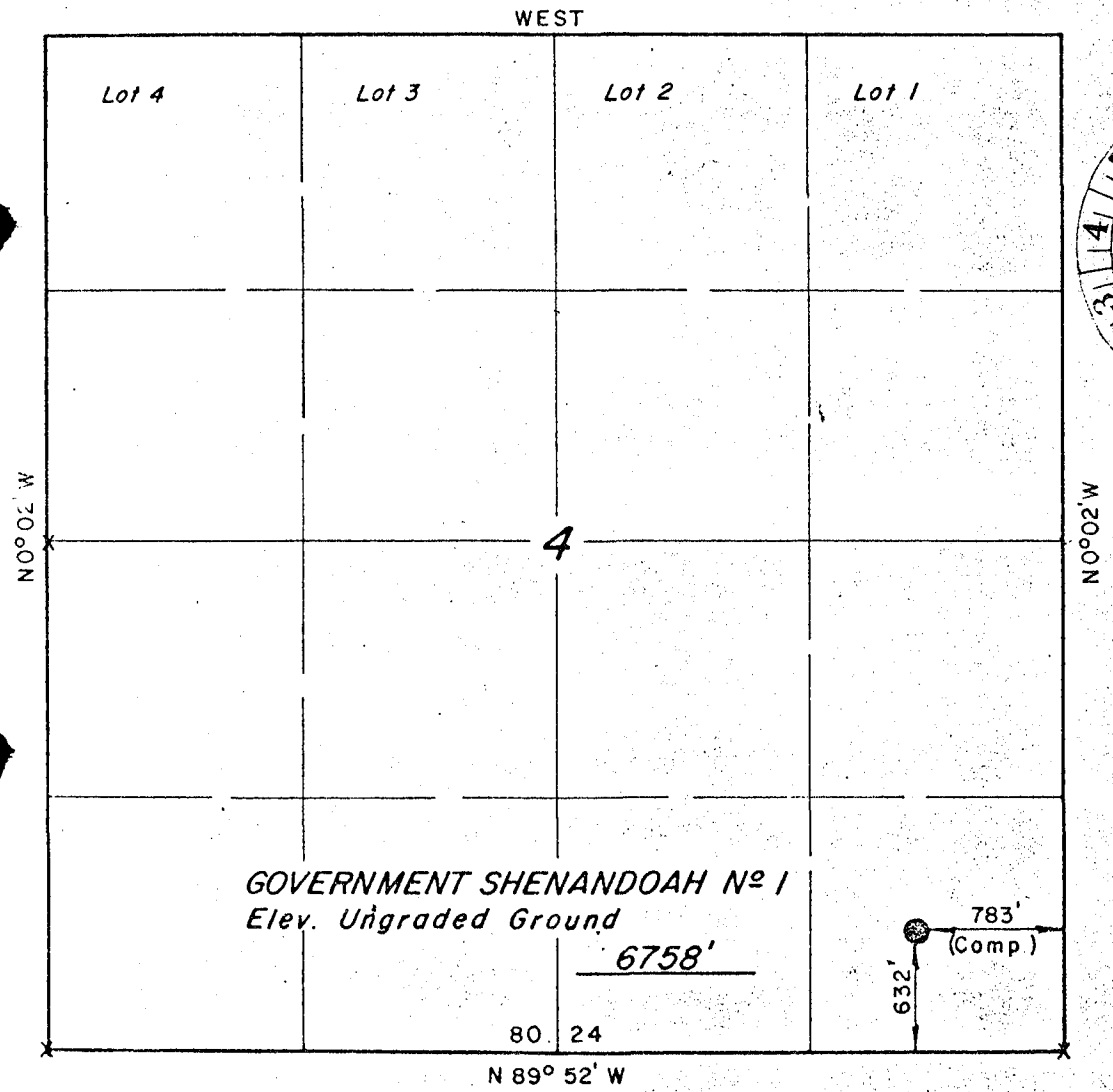
*See Instructions On Reverse Side

PROJECT

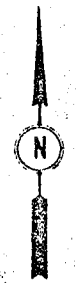
FLYING DIAMOND

Well location, *GOVERNMENT SHENANDOAH Nº 1*, located as shown in the SE 1/4 SE 1/4 Section 4, T4S, R 20 E, S.L.B.&M. Uintah County, Utah.

T 4 S, R 20E, S.L.B.&M.



X = Section Corners Located



CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR
REGISTRATION Nº 3137
STATE OF UTAH

UINTAH ENGINEERING & LAND SURVEYING
P. O. BOX Q — 110 EAST - FIRST SOUTH
VERNAL, UTAH - 84078

SCALE 1" = 1000'	DATE 7 / 7 / 78
PARTY LCK DJ BFW	REFERENCES GLO Plat
WEATHER Fair	FILE FLYING DIAMOND

Oil and Gas Drilling EA No. 1235

United States Department of the Interior
Geological Survey
8440 Federal Building
Salt Lake City, Utah 84138

Usual Environmental Analysis

Lease No. U-36306

Operator Flying Diamond Well No. 1

Location 632' FSL & 783' FEL Sec. 4 T. 4S R. 20E

County Uintah State Utah Field Wildcat

Status: Surface Ownership Public Minerals Federal

Joint Field Inspection Date July 19, 1978

Participants and Organizations:

Gordon W. McCrary	U.S.G.S
Bill Arnold	BLM
Ralph Heft	BLM
Ed Bland	Flying Diamond
John Clark	Flying Diamond
Johnny Fausett	Dirt Contractor

Related Environmental Analyses and References:

(1) Shenandoah Unit Resources Analysis Bureau
Bureau of Land Management, Utah

(2)

Analysis Prepared by:

Gordon McCrary

Date July 19, 1978

Proposed Action:

On July 10, 1978, Flying Diamond Oil Corporation filed an Application for Permit to Drill the No. 1 exploratory well, an 8800-foot oil and gas test of the Weber Formation; located at an elevation of 7320 ft. in the SW¼ SW¼ Section 4, T. 4 S., R. 20 E., SLB&M on Federal mineral lands and Public surface; Lease No. U-36306. There was no objection raised to the well site or to the access road.

A rotary rig would be used for the drilling. An adequate casing and cementing program is proposed. Fresh-water sands and other mineral-bearing formations would be protected. A Blowout Preventer would be used during the drilling of the well. The proposed pressure rating should be adequate. Details of the operator's NTL-6 10-Point Subsurface and 13-Point Surface Protection Plans are on file in the U.S.G.S. District Office in Salt Lake City, Utah, and the U.S.G.S. Northern Rocky Mountain Area Office in Casper, Wyoming.

A working agreement has been reached with the BLM, the controlling surface agency. Rehabilitation plans would be decided upon as the well neared completion; the Surface Management Agency would be consulted for technical expertise on those arrangements.

The operator proposes to construct a drill pad 150 ft. wide by 275 ft. and a reserve pit 100 ft. by 125 ft. A new access road will be constructed 18 ft. wide by 3.65 miles long and upgrade .18 ft. wide by .45 miles access road from an existing and improved road. The operator proposes to construct production facilities on disturbed area of the proposed drill pad.

If production is established, plans for a gas flow line will be submitted to the appropriate agencies for approval. The anticipated starting date is August 1, and duration of drilling activities would be about 60 days.

Location and Natural Setting:

The proposed drillsite is approximately 11 miles northwest of Vernal, Utah, the nearest town. A good road runs to within 4 miles of the location.

This well is in the Wildcat Field.

TOPOGRAPHY: Top portion of a small ridge extending southerly from Little Mountain. The sides of this ridge slope to the northeast and southwest and are relatively steep.

Geology:

The surface geology is Mancos Formation. The soil is sandy clay. No geologic hazards are known near the drillsite.

Seismic risk for the area is minor. Anticipated geologic tops are filed with the 10-Point Subsurface Protection Plan accompanying the Application for Permit to Drill.

Approval of the proposed action would be conditioned that adequate and sufficient electric/radioactive/density logging surveys would be made to locate and identify any potential mineral resources. Production

casing and cementing would be adjusted to assure no influence of the hydrocarbon zones through the well bore on these minerals. In the event the well is abandoned, cement plugs will be placed with drilling fluid in the hole to assure protection of any mineral resources.

The potential for loss of circulation would exist and is possible in the sandstone units. Loss of circulation may result in the lowering of the mud levels, which might permit exposed upper formations to blow out or to cause formation to slough and stick to drill pipe. A loss of circulation would result in contamination due to the introduction of drilling muds, mud chemicals, filler materials, and water deep into the permeable zone, fissures, fractures, and caverns within the formation in which fluid loss is occurring. The use of special drilling techniques, drilling muds, and lost circulation materials may be effective in controlling lost circulation.

A geologic review of the proposed action has been furnished by the Area Geologist, U.S. Geological Survey, Salt Lake City, Utah.

The operator's drilling, cementing, casing and blowout prevention programs have been reviewed by the Geological Survey engineers and determined to be adequate.

Soils:

No detailed soil survey has been made of the project area. The top soils in the area range from a sandy clay to a clay type soil. The soil is subject to runoff from rainfall and has a high runoff potential and sediment production would be high. The soils are mildly to

moderately alkaline and support the salt-desert shrub community. Cedar trees, sagebrush and grasses are present.

Top soil would be removed from the surface and stockpiled. The soil would be spread over the surface of disturbed areas when abandoned to aid in rehabilitation of the surface. Rehabilitation is necessary to prevent erosion and encroachment of undesired species on the disturbed areas. The operator proposes to rehabilitate the location and access roads per the recommendations of the Bureau of Land Management.

Approximately 6 acres of land would be stripped of vegetation. This would increase the erosional potential. Proper construction practice, construction of water bars, reseeding of slope-cut area would minimize this impact.

Air:

No specific data on air quality is available at the proposed location. There would be a minor increase in air pollution due to emmissions from rig and support traffic engines. Particulate matter would increase due to dust from travel over unpaved dirt roads. The potential for increased air pollution due to leaks, spills, and fire would be possible.

Relatively heavy traffic would be anticipated during the drilling-operations phase, increasing dust levels and exhaust pollutants in the area. If the well was to be completed for production, traffic would be reduced substantially to a maintenance schedule with a corresponding decrease of dust levels and exhaust pollutants to minor levels. If the

project results in a dry hole, all operations and impact from vehicular traffic would cease after abandonment. Due to the limited number of service vehicles and limited time span of their operation, the air quality would not be substantially reduced.

Toxic or noxious gases would not be anticipated.

Precipitation:

Annual rainfall should range from about 8 to 11" at the proposed location. The majority of the numerous drainages in the surrounding area are of a non-perennial nature flowing only during early spring runoff and during extremely heavy rain storms. This type of storm is rather uncommon as the normal annual precipitation is around 8".

Winds are medium and gusty, occurring predominately to east from west. Air mass inversions are rare.

The climate is semi-arid with abundant sunshine, hot summers and cold winters with temperature variations on a daily and seasonal basis.

Surface Water Hydrology:

Major large drainages from the Uintah Mountains flow southerly into the Green River, and are perennial.

The majority of smaller drainages are non-perennial and are limited to runoff from spring thaw and thunderstorms.

Some additional erosion would be expected in the area since surface

vegetation would be removed. If erosion became serious, drainage systems such as water bars and dikes would be installed to minimize the problem.

The proposed project should have minor impact on the surface water systems.

The potentials of pollution of water would be present from leaks or spills. The operator is required to report and clean-up all spills and leaks.

Ground Water Hydrology:

Some minor pollution of ground water systems would occur with the introduction of drilling fluids (filtrate) into the aquifer. This is normal and unavoidable during rotary drilling operations. The potential for communication, contamination and comingling of formations via the well bore would be possible. The drilling program is designed to prevent this. There is need for more data on hydrologic systems in the area and the drilling of this well may provide some basis information as all shows of fresh water would be reported. Water production with the gas would require disposal of produced water per the requirements of NTL-2B.

The depths of fresh-water formations are listed in the 10-Point Subsurface Protection Plan.

There would be no tangible effect on water migration in fresh-water aquifers. The pits would be lined. If fresh water should be available

from the well, the owner or surface agency may request completion as a water well if given approval.

A portion of the dike greater than 4 ft. above the ground consisting of fill will be lined with Bentonite.

VEGETATION: Cedar trees, sagebrush and grasses.

Proposed action would remove about 6 acres of vegetation. Removal of vegetation would increase the erosional potential and there would be a minor decrease in the amount of vegetation available for grazing.

The operator proposes to rehabilitate the surface upon completion of operations.

WILDLIFE:

Animal and plant inventory has been made by the BLM. No endangered plants or animals are known to habitat on the project area. The fauna of the area consists predominantly of the mule deer, coyotes, rabbits, and varieties of small ground squirrels and other types of rodents and various types of reptiles. The area is used by man for the primary purpose of grazing domestic livestock and sheep.

The birds of the area are raptors, finches, ground sparrows, magpies, crows and jays.

Social-Economic Effect:

An on the ground surface archaeological reconnaissance would be required prior to approval of the proposed action. Appropriate clearances would

then be obtained from the surface managing agency. If a historic artifact, an archaeological feature or site is discovered during construction operations; activity would cease until the extent, the scientific importance, and the method of mitigating the adverse effects could be determined by a qualified cultural resource specialist.

There are no occupied dwellings or other facilities of this nature in the general area. Minor distractions from aesthetics would occur over the lifetime of the project and is judged to be minor. All permanent facilities placed on the location would be painted to blend in with the natural environment. Present use of the area is grazing, recreation, and oil and gas activities.

Noise from the drilling operation may temporarily disturb wildlife and people in the area. Noise levels would be moderately high during drilling and completion operations. Upon completion, noise levels would be infrequent and significantly less. If the area is abandoned, noise levels should return to pre-drilling levels.

The site is not visible from any major roads. After drilling operations, completion equipment would be visible to passersby of the area but would not present a major intrusion.

The economic effect of one well would be difficult to determine. The overall effect of oil and gas drilling and production activity are significant in Uintah County.

But should this well discover a significant new hydrocarbon source, local, state and possibly national economics might be improved. In this instance, other development wells would be anticipated, with substantially greater environmental and economic impacts.

Should the well site be abandoned, surface rehabilitation would be done according to the surface agency's requirements and to U.S.G.S.'s satisfaction. This would involve leveling, contouring, reseeding, etc., of the location and possibly the access road. If the well should produce hydrocarbons, measures would be undertaken to protect wildlife and domestic stock from the production equipment.

LAND USE:

There are no national, state, or local parks, forests, wildlife refuges of ranges, grasslands, monuments, trails or other formally designated recreational facilities near the proposed location.

The proposed location is within the Shenandoah Planning Unit. This Environmental Assessment Record was compiled by the Bureau of Land Management, the surface managing agency of the Federal surface in the area. The study includes additional information on the environmental impact of oil and gas operations in this area and gives land use recommendations. The E.A.R. is on file in the agency's State Offices and is incorporated herein by reference.

Waste Disposal:

The mud and reserve pits would contain all fluids used during the drilling operations.

Sewage would be handled according to State sanitary codes. For further information, see the 13-Point Surface Plan.

Alternatives to the Proposed Action:

1. Not approving the proposed Permit -- The oil and gas lease grants the lessee exclusive right to drill for, mine, extract, remove and dispose of all oil and gas deposits.

Under leasing provisions, the Geological Survey has an obligation to allow mineral development if the environmental consequences are not too severe or irreversible. Upon rehabilitation of the site, the environmental effects of this action would be substantially mitigated, if not totally annulled. Permanent damage to the surface and subsurface would be prevented as much as possible under U.S.G.S. and other controlling agencies' supervision with rehabilitation planning reversing almost all effects. Additionally, the growing scarcity of oil and gas should be taken into consideration. Therefore, the alternative of not proceeding with the proposed action at this time is rejected.

2. Minor relocation of the well site and access road or any special, restrictive stipulations or modifications to the proposed program would not significantly reduce the environmental impact. There are no severe vegetative, animal or archaeological-historical-cultural conflicts at the site. Since only a minor impact on the environment would be expected, the alternative of moving the location is rejected.

At abandonment, normal rehabilitation of the area such as contouring,

reseeding, etc., would be undertaken with an eventual return to the present status as outlined in the 13-Point Surface Plan.

The location has more desirable alternatives, however, operator has submitted geologic evidence to support the proposed site and will send an extra copy of submittal. This would not represent an unusual environmental analysis.

The pit was moved 20 feet south to clear the drainage.

Adverse Environmental Effects Which Cannot Be Avoided:

Surface distrubance and removal of vegetation from approximately 6 acres of land surface for the lifetime of the project which would result in increased and accelerated erosional potential. Grazing would be eliminated in the disturbed areas and there would be a minor and temporary disturbance of wildlife and livestock. Minor induced air pollution due to exhaust emmissions from rig engines of support traffic engines would occur. Minor increase in dust pollution would occur due to vehicular traffic associated with the operation. If the well is a gas producer, additional surface disturbance would be required to install production pipelines. The potential for fires, leaks, spills of gas, oil or water would exist. During the construction and drilling phases of the project, noise levels would increase. Potential for subsurface damage to fresh water aquifers and other geologic formations exists. Minor distractions from aesthetics during the lifetime of the project would exist. If the well is a producer, an irreplacable and irretrievable committment of resources would be made. Erosion from the site would eventually be

carried as sediment in the Green River. The potential for pollution to the Green River would exist through leaks and spills.

Determination:

This requested action does not constitute a major Federal action significantly affecting the environment in the sense of NEPA, Sec. 102(2)(C).

District Engineer
U. S. Geological Survey
Conservation Division
Oil and Gas Operations
Salt Lake City District

SE SE
Weber

STATE OF UTAH
DIVISION OF OIL, GAS, AND MINING

** FILE NOTATIONS **

Date: Sept 1, 1978

Operator: Flying Diamond Oil Co-p.

Well No: Gov't - Shenandoah #1X

Location: Sec. 4 T. 4S R. 20E County: Uintah

File Prepared: [ ] Entered on N.I.D.: [ ]

Card Indexed: [ ] Completion Sheet: [ ]

API Number: 43-047-30487

CHECKED BY:

Administrative Assistant: DW

Remarks: No other wells - Should be for Survey Plat

Petroleum Engineer: [illegible]

Remarks:

Director: [illegible]

Remarks:

INCLUDE WITHIN APPROVAL LETTER:

Bond Required: [ ] Survey Plat Required: [ ]

Order No. _____ Surface Casing Change to _____ [ ]

Rule C-3(c), Topographic exception/company owns or controls acreage within a 660' radius of proposed site [ ]

O.K. Rule C-3 [ ] O.K. In _____ Unit

Other:

[ ] Letter Written/~~Approved~~

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING
1588 West North Temple
Salt Lake City, Utah 84116
(801) 533-5771

September 7, 1978

Flying Diamond Oil Corporation
1700 Broadway
Suite 900
Denver, Colorado 80290

Re: Well No. Government-
Shenandoah #1
Sec. 4, T. 4 S, R. 20 E,
Uintah County, Utah

Gentlemen:

Insofar as this office is concerned, approval to drill the above referred to well is hereby granted in accordance with Rule C-3, General Rules and Regulations and Rules of Practice and Procedure.

Should you determine that it will be necessary to plug and abandon this well, you are hereby requested to immediately notify the following:

PATRICK L. DRISCOLL - Chief Petroleum Engineer
HOME: 582-7247
OFFICE: 533-5771

Enclosed please find Form OGC-8-X, which is to be completed whether or not water sands (aquifers) are encountered during drilling.

Further, it is requested that this Division be notified within 24 hours after drilling operations commence.

The API number assigned to this well is 43-047-30487.

Very truly yours,

DIVISION OF OIL, GAS, AND MINING

CLEON B. FEIGHT
Director

cc: U.S. Geological Survey

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

5. LEASE DESIGNATION AND SERIAL NO.: U36306

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A

1. OIL WELL ☐ GAS WELL ☐ OTHER Drill nine siesmic holes for sonic survey.

7. UNIT AGREEMENT NAME: N/A

2. NAME OF OPERATOR: FLYING DIAMOND OIL CORPORATION dba BOW VALLEY EXPLORATION (U.S.) INC.

8. FARM OR LEASE NAME: Government-Shenandoah

3. ADDRESS OF OPERATOR: 1700 Broadway, Suite 900, Denver, Colorado 80290

9. WELL NO.: 1

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 632' FSL, 783' FEL, SEC 4-T4S-R20E

10. FIELD AND POOL, OR WILDCAT: Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: SEC 4-T4S-R20E, SLM

14. PERMIT NO.:

15. ELEVATIONS (Show whether DF, RT, GR, etc.): GR 6758'

12. COUNTY OR PARISH: Uintah

13. STATE: Utah

16. **Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data**

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	☐
REPAIR WELL	☐	CHANGE PLANS	☐	(Other)			☐
(Other)			X	(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

Flying Diamond Oil Corp. plans to perform a sonic travel time survey @ TD. This survey requires drilling nine (9) 4-3/4" diameter holes to a depth of 150'. Five of these holes will be drilled approximately 600' east on the existing road. The remaining four holes will be drilled approximately 600' southwest on the South side of an existing fence line. The five holes will require no additional surface disturbance. The four holes will require restoration of the fence line row.

1. Proposed casing program:

None

2. Circulating medium:
Air

APPROVED BY THE DIVISION OF
OIL, GAS, AND MINING
DATE: Sept. 20, 1978
BY: P. L. Driscoll

After charges have been set off and survey run, hole cuttings will be replaced in holes and surface restored.

18. I hereby certify that the foregoing is true and correct

SIGNED John W. Clark TITLE Division Engineer DATE 9-12-78

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

COMPANY FLYING DIAMOND OIL & GAS CORPORATION

WELL GOVT. SHENANDOAH #1

TEST NO. 1

COUNTY UINTA

STATE UTAH

Dave Valley

JOHNSTON

Schlumberger

technical report

F.R.# 09749 D

JOHNSTON
Schlumberger

SURFACE INFORMATION

Description (Rate of Flow)	Time	Pressure (P.S.I.G.)	Surface Choke
Opened Tool	0955	-	1/8"
BLOW, 1" INCREASING			
BLOW OFF BOTTOM OF BUCKET	0959	-	"
	1005	1 1/2	"
	1025	2	"
CLOSED FOR INITIAL SHUT-IN	1026	-	"
FINISHED SHUT-IN	1126	-	"
RE-OPENED TOOL	1130	-	"
BLOW, 1 1/2" INCREASING			
BLOW OFF BOTTOM OF BUCKET	1134	-	"
	1140	1	"
	1150	1 1/2	"
	1200	1 1/2	"
	1210	1 1/2	"
	1220	1 1/2	"
CLOSED FOR FINAL SHUT-IN	1230	1 1/2	"
FINISHED SHUT-IN	1400	-	"
PULLED PACKER LOOSE	1402	-	-

Cushion Type	Amount	Pressure	Bottom Choke
	-		Size 15/16"

MUD DATA

Mud Type LOW SOLIDS-NON DISPERSED Wt. 8.8
Viscosity 34 Water Loss 10 C.C.
Resist: of Mud 1 @ 70 °F; of Filtrate 1.1 @ 70 °F
Chloride Content 500 PPM

EQUIPMENT & HOLE DATA

Type Test M.F.E. OPEN HOLE
Formation Tested WEBER
Elevation 6758 Ft.
Net Productive Interval 95 Ft.
Estimated Porosity - %
All Depths Measured From KELLY BUSHING
Total Depth 4983 Ft.
Main Hole/Casing Size 8 3/4"
Rat Hole/Liner Size -
Drill Collar Length 596' I.D. -
Drill Pipe Length 4266' I.D. 3.80"
Packer Depth(s) 4862 & 4868 Ft.

MULTI-FLOW EVALUATOR FLUID SAMPLE DATA

Sampler Pressure 0 P.S.I.G. at Surface
Recovery: Cu. Ft. Gas -
cc. Oil -
cc. Water UNDETERMINED AMOUNT
cc. Mud -
Tot. Liquid cc. -
Gravity - °API @ - °F.
Gas/Oil Ratio - cu. ft./bbl.

	RESISTIVITY	CHLORIDE CONTENT
Recovery Water	.8 @ 67 °F.	250 ppm
Recovery Mud	- @ - °F.	
Recovery Mud Filtrate	- @ - °F.	- ppm
Mud Pit Sample	1 @ 70 °F.	
Mud Pit Sample Filtrate	1.1 @ 70 °F.	500 ppm

RECOVERY DESCRIPTION	FEET	BARRELS	% OIL	% WATER	% OTHERS	API GRAVITY	RESISTIVITY	CHL. PPM
WATER	1650	-		100		@ °F.	.95 @ 70 °F.	450
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	

Remarks:

Address P.O. BOX 130; ROOSEVELT, UTAH 84066

Company FLYING DIAMOND OIL CORPORATION Field LITTLE MTN. (WILD CAT)
Well GOVT. SHENANDOAH #1 Location SEC. 4 - T4S - R20E
Test Interval 4868' TO 4983' Test # 1 Date 9-14-78

County UINTA State UTAH
Technician RICHARDS (VERNAL) Test Approved By MR. JACK MERCER

Field Report No. 09749 D
No. Reports Requested 10(9x's)

JOHNSTON
Schlumberger

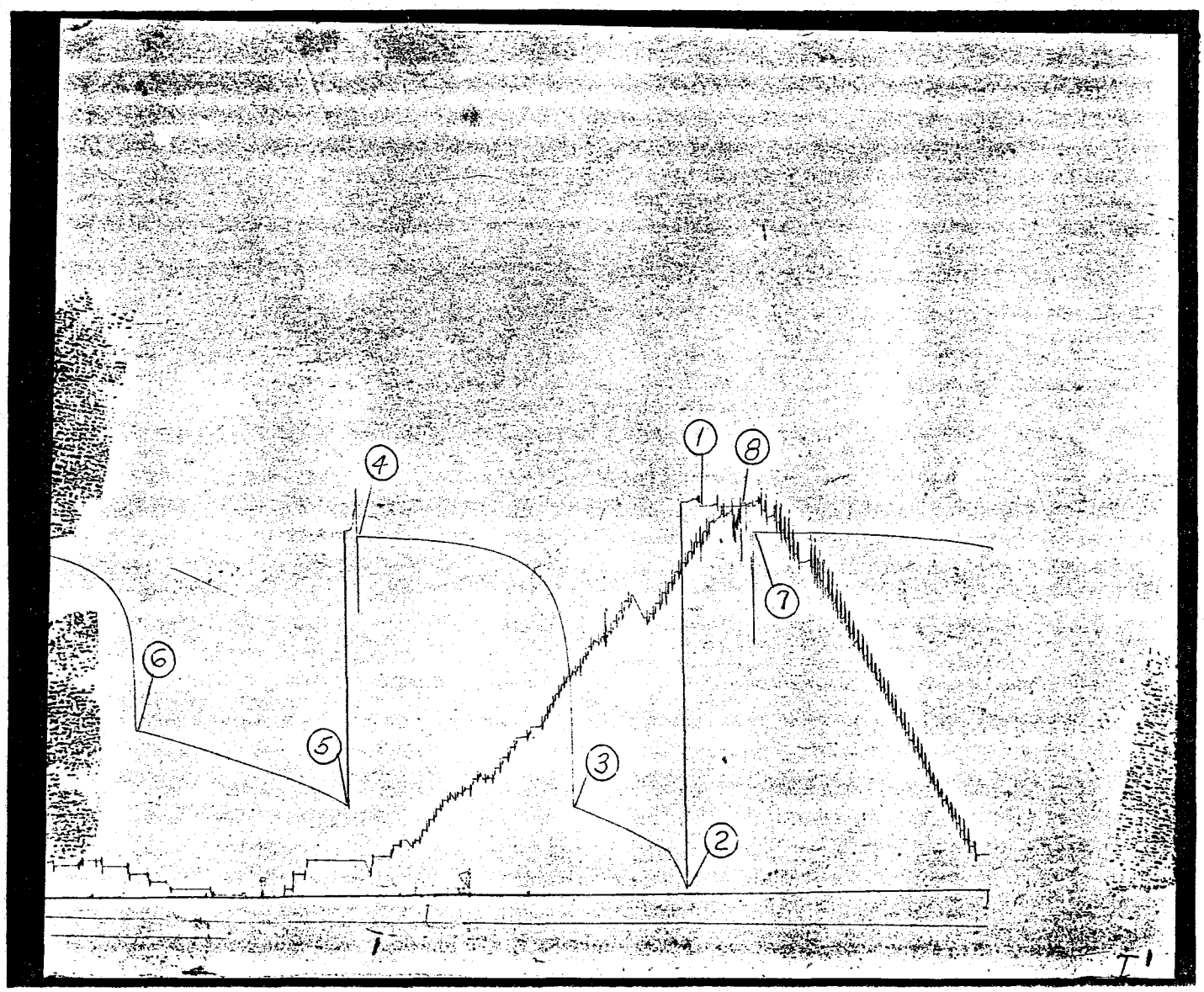
FIELD REPORT NO.: 09749 D

INSTRUMENT NO.: J-061

CAPACITY: 4700#

NO. OF REPORTS: 10-

PRESSURE DATA FROM THIS CHART IS PRESENTED ON NEXT PAGE



BOTTOM HOLE PRESSURE AND TIME DATA

JOHNSTON Schlumberger

INSTRUMENT NO.: J-061 CAPACITY(P.S.I.): 4700 DEPTH: 4874 FT.

PORT OPENING: INSIDE BOTTOM HOLE TEMP.: 96

DESCRIPTION	LABELED POINTS	PRESSURE (P.S.I.)	GIVEN TIME	COMPUTED TIME
INITIAL HYDROSTATIC MUD	1	2287.7		
INITIAL FLOW(1)	2	38.8		
INITIAL FLOW(2)	3	522.0	31	31
INITIAL SHUT-IN	4	2124.4	60	60
FINAL FLOW(1)	5	540.0		
FINAL FLOW(2)	6	991.9	60	60
FINAL SHUT-IN	7	2132.9	90	92
FINAL HYDROSTATIC MUD	8	2304.8		

INCREMENTAL READINGS

LABEL POINT	DELTA TIME	PRESSURE (P.S.I.)	T + DT/DT	LOG	PW - PF (P.S.I.)	COMMENTS
1		2287.7				HYDROSTATIC MUD
2	0	38.8				INITIAL FLOW(1)
	5	255.2				
	10	313.1				
	15	368.2				
	20	418.5				
	25	463.1				
	30	508.7				
3	31	522.0				INITIAL FLOW(2)
3	0	522.0				STARTED SHUT-IN
	5	1733.3	7.200	0.857	1211.3	
	10	1896.6	4.100	0.613	1374.6	
	15	1973.4	3.067	0.487	1451.5	
	20	2018.1	2.550	0.407	1496.1	
	25	2048.4	2.240	0.350	1526.5	
	30	2069.3	2.033	0.308	1547.4	
	35	2085.5	1.886	0.275	1563.5	
	40	2097.8	1.775	0.249	1575.8	
	45	2106.4	1.689	0.228	1584.4	
	50	2113.9	1.620	0.210	1592.0	
	55	2119.6	1.564	0.194	1597.7	
4	60	2124.4	1.517	0.181	1602.4	INITIAL SHUT-IN
5	0	540.0				FINAL FLOW(1)
	5	591.3				
	10	639.7				
	15	684.3				
	20	725.1				
	25	763.1				
	30	799.2				
	35	835.2				
	40	871.3				
	45	904.5				
	50	934.9				
	55	965.3				
6	60	991.9				FINAL FLOW(2)

FIELD REPORT NO. 09749D

LABEL POINT	DELTA TIME	PRESSURE (P.S.I.)	T + DT/DT	LOG	PW - PF (P.S.I.)	COMMENTS
6	0	991.9				STARTED SHUT-IN
	1	1509.2	92.000	1.964	517.4	
	2	1625.1	46.500	1.667	633.2	
	3	1691.5	31.333	1.496	699.6	
	4	1737.1	23.750	1.376	745.2	
	5	1775.0	19.200	1.283	783.2	
	6	1805.4	16.167	1.209	813.6	
	7	1833.0	14.000	1.146	841.1	
	8	1855.7	12.375	1.093	863.9	
	9	1874.7	11.111	1.046	882.8	
	10	1891.8	10.100	1.004	899.9	
	12	1921.2	8.583	0.934	929.4	
	14	1945.0	7.500	0.875	953.1	
	16	1965.9	6.687	0.825	974.0	
	18	1982.0	6.056	0.782	990.1	
	20	1997.2	5.550	0.744	1005.3	
	22	2010.5	5.136	0.711	1018.6	
	24	2021.9	4.792	0.680	1030.0	
	26	2030.4	4.500	0.653	1038.5	
	28	2038.9	4.250	0.628	1047.1	
	30	2047.5	4.033	0.606	1055.6	
	35	2063.6	3.600	0.556	1071.8	
	40	2076.9	3.275	0.515	1085.0	
	45	2088.3	3.022	0.480	1096.4	
	50	2096.9	2.820	0.450	1105.0	
	55	2103.5	2.655	0.424	1111.6	
	60	2110.1	2.517	0.401	1118.3	
	65	2114.9	2.400	0.380	1123.0	
	70	2119.6	2.300	0.362	1127.8	
	75	2123.4	2.213	0.345	1131.6	
	80	2126.3	2.137	0.330	1134.4	
	85	2129.1	2.071	0.316	1137.3	
	90	2131.0	2.011	0.303	1139.2	
7	92	2132.9	1.989	0.299	1141.1	FINAL SHUT-IN
8		2304.8				HYDROSTATIC MUD

COMPANY ~~FLYING DIAMOND OIL CORPORATION~~ Bow Valley

WELL GOVT. SHENANDOAH #1 TEST NO. 2 COUNTY UINTAH STATE UTAH

JOHNSTON

Schlumberger

technical report

F.R. # 13801 D

JOHNSTON
Schlumberger

SURFACE INFORMATION

Description (Rate of Flow)	Time	Pressure (P.S.I.G.)	Surface Choke
Opened Tool	0332	–	1/8''
NO BLOW, INCREASING TO			
BLOW, 8'' IN WATER			
CLOSED FOR INITIAL SHUT-IN	0347	–	''
FINISHED SHUT-IN	0447	–	''
RE-OPENED TOOL	0450	–	''
SLIGHT BUBBLES			
BLOW, 2'' IN WATER	0455	–	''
BLOW, 8'' IN WATER	0505	–	''
BLOW, 12'' IN WATER	0520	–	''
	0530	3/4	''
CLOSED FOR FINAL SHUT-IN	0610	–	''
FINISHED SHUT-IN	0810	–	''
PULLED PACKER LOOSE	0813	–	–

Cushion Type	Amount	Pressure	Bottom Choke
	–		Size 15/16''

MUD DATA

Mud Type LOW SOLID GEL Wt. 9.1
Viscosity 44 Water Loss 9.2 C.C.
Resist: of Mud 3.7 @ 40 °F; of Filtrate 3.6 @ 40 °F
Chloride Content 600 PPM

EQUIPMENT & HOLE DATA

Type Test M.F.E. OPEN HOLE
Formation Tested HUMBUG
Elevation 6776 K.B. Ft.
Net Productive Interval 16 Ft.
Estimated Porosity – %
All Depths Measured From KELLY BUSHING
Total Depth 6925 Ft.
Main Hole/Casing Size 8 3/4''
Rat Hole/Liner Size –
Drill Collar Length 552' I.D. 2.25''
Drill Pipe Length 6259' I.D. 3.80''
Packer Depth(s) 6844 & 6850 Ft.

MULTI-FLOW EVALUATOR FLUID SAMPLE DATA

Sampler Pressure 2 P.S.I.G. at Surface
Recovery: Cu. Ft. Gas –
cc. Oil –
cc. Water 2400
cc. Mud –
Tot. Liquid cc. 2400
Gravity – °API @ – °F.
Gas/Oil Ratio – cu. ft./bbl.

	RESISTIVITY		CHLORIDE CONTENT
Recovery Water	4.0 @ 70 °F.		450 ppm
Recovery Mud	– @ – °F.		
Recovery Mud Filtrate	– @ – °F.		– ppm
Mud Pit Sample	3.7 @ 40 °F.		
Mud Pit Sample Filtrate	3.6 @ 40 °F.		600 ppm

RECOVERY DESCRIPTION	FEET	BARRELS	% OIL	% WATER	% OTHERS	API GRAVITY	RESISTIVITY	CHL. PPM
WATER CUT MUD	200	2.84		10		@ °F.	3.7 @ 47 °F.	600
MUD CUT WATER	770	5.80		95	5	@ °F.	4.0 @ 68 °F.	400
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	

Remarks:

Address P.O. DRAWER 130; ROOSEVELT, UTAH 84066

Company FLYING DIAMOND OIL CORPORATION Field (WILD CAT) LITTLE MOUNTAIN
Well GOVT. SHENANDOAH #1 Location SEC. 4 - T4S - R20E
Test Interval 6850' TO 6925' Test # 2 Date 10-3-78

County UINTAH State UTAH
Technician RICHARDS (VERNAL) Test Approved By MR. CECIL FOSTER

Field Report No. 13801 D
No. Reports Requested 10 (9X)

JOHNSTON
Schlumberger

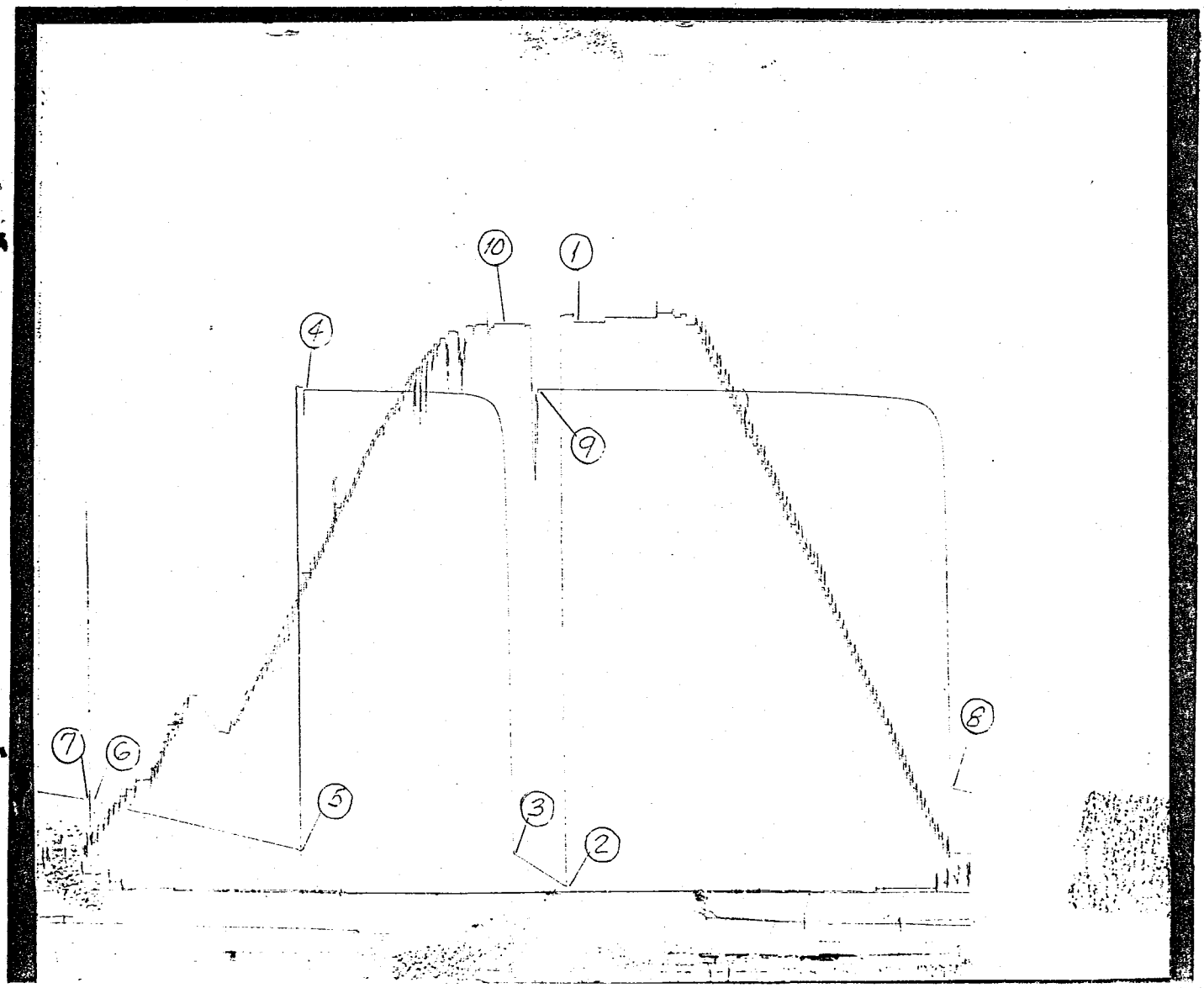
FIELD REPORT NO.: 13801 D

INSTRUMENT NO.: J-1237

CAPACITY: 4700#

NO. OF REPORTS: 10-

PRESSURE DATA FROM THIS CHART IS PRESENTED ON NEXT PAGE



BOTTOM HOLE PRESSURE AND TIME DATA

JOHNSTON Schlumberger

INSTRUMENT NO.: J-1237 CAPACITY(P.S.I.): 4700 DEPTH: 6862 FT.

PORT OPENING: OUTSIDE BOTTOM HOLE TEMP.: 104

DESCRIPTION	LABELED POINTS	PRESSURE (P.S.I.)	GIVEN TIME	COMPUTED TIME
INITIAL HYDROSTATIC MUD	1	3345.6		
INITIAL FLOW(1)	2	40.8		
INITIAL FLOW(2)	3	232.9	15	15
INITIAL SHUT-IN	4	2946.2	60	61
FINAL FLOW(1)	5	246.1		
FINAL FLOW(2)	8	621.9	80	82
FINAL SHUT-IN	9	2952.8	120	119
FINAL HYDROSTATIC MUD	10	3334.3		

INCREMENTAL READINGS

LABEL POINT	DELTA TIME	PRESSURE (P.S.I.)	T + DT/DT	LOG	PW - PF (P.S.I.)	COMMENTS
1		3345.6				HYDROSTATIC MUD
2	0	40.8				INITIAL FLOW(1)
	5	102.0				
	10	167.9				
3	15	232.9				INITIAL FLOW(2)
3	0	232.9				STARTED SHUT-IN
	5	2792.7	4.000	0.602	2559.8	
	10	2902.0	2.500	0.398	2669.1	
	15	2921.8	2.000	0.301	2688.8	
	20	2931.2	1.750	0.243	2698.3	
	25	2935.9	1.600	0.204	2703.0	
	30	2938.7	1.500	0.176	2705.8	
	35	2940.6	1.429	0.155	2707.7	
	40	2941.5	1.375	0.138	2708.6	
	45	2943.4	1.333	0.125	2710.5	
	50	2944.4	1.300	0.114	2711.4	
	55	2945.3	1.273	0.105	2712.4	
	60	2946.2	1.250	0.097	2713.3	
4	61	2946.2	1.246	0.095	2713.3	INITIAL SHUT-IN
5	0	246.1				FINAL FLOW(1)
	5	276.2				
	10	298.8				
	15	321.4				
	20	344.0				
	25	366.7				
	30	389.3				
	35	411.9				
	40	435.4				
	45	457.1				
	50	480.6				
	55	504.2				
6	60	528.6				CYCLED TOOL
7	61	537.1				RE-OPENED TOOL
	65	549.4				
	70	571.0				

LABEL POINT	DELTA TIME	PRESSURE (P.S.I.)	T + DT/DT	LOG	PW - PF (P.S.I.)	COMMENTS
	75	591.7				
	80	613.4				
8	82	621.9				FINAL FLOW(2)
8	0	621.9				STARTED SHUT-IN
	1	1354.6	98.000	1.991	732.7	
	2	2267.2	49.500	1.695	1645.3	
	3	2643.9	33.333	1.523	2022.0	
	4	2746.6	25.250	1.402	2124.7	
	5	2794.6	20.400	1.310	2172.7	
	6	2823.8	17.167	1.235	2201.9	
	7	2846.4	14.857	1.172	2224.5	
	8	2861.5	13.125	1.118	2239.6	
	9	2872.8	11.778	1.071	2250.9	
	10	2879.4	10.700	1.029	2257.5	
	12	2889.7	9.083	0.958	2267.9	
	14	2896.3	7.929	0.899	2274.4	
	16	2902.0	7.063	0.849	2280.1	
	18	2906.7	6.389	0.805	2284.8	
	20	2910.5	5.850	0.767	2288.6	
	22	2913.3	5.409	0.733	2291.4	
	24	2916.1	5.042	0.703	2294.2	
	26	2918.9	4.731	0.675	2297.1	
	28	2920.8	4.464	0.650	2298.9	
	30	2923.6	4.233	0.627	2301.8	
	35	2928.3	3.771	0.577	2306.5	
	40	2931.2	3.425	0.535	2309.3	
	45	2934.9	3.156	0.499	2313.1	
	50	2937.8	2.940	0.468	2315.9	
	55	2939.6	2.764	0.441	2317.8	
	60	2942.5	2.617	0.418	2320.6	
	65	2944.4	2.492	0.397	2322.5	
	70	2947.2	2.386	0.378	2325.3	
	75	2948.1	2.293	0.360	2326.2	
	80	2949.1	2.213	0.345	2327.2	
	85	2950.0	2.141	0.331	2328.1	
	90	2950.0	2.078	0.318	2328.1	
	95	2950.0	2.021	0.306	2328.1	
	100	2951.0	1.970	0.294	2329.1	
	105	2951.0	1.924	0.284	2329.1	
	110	2951.9	1.882	0.275	2330.0	
	115	2951.9	1.843	0.266	2330.0	
9	119	2952.8	1.815	0.259	2331.0	FINAL SHUT-IN
10		3334.3				HYDROSTATIC MUD

JOHNSTON

Schlumberger

technical report

F.R. #16438 D

COMPANY FLYING DIAMOND OIL CORPORATION WELL GOVT. SHENANDOAH #1 TEST NO. 3 COUNTY UINTAH STATE UTAH

JOHNSTON

PRESSURE LOG*

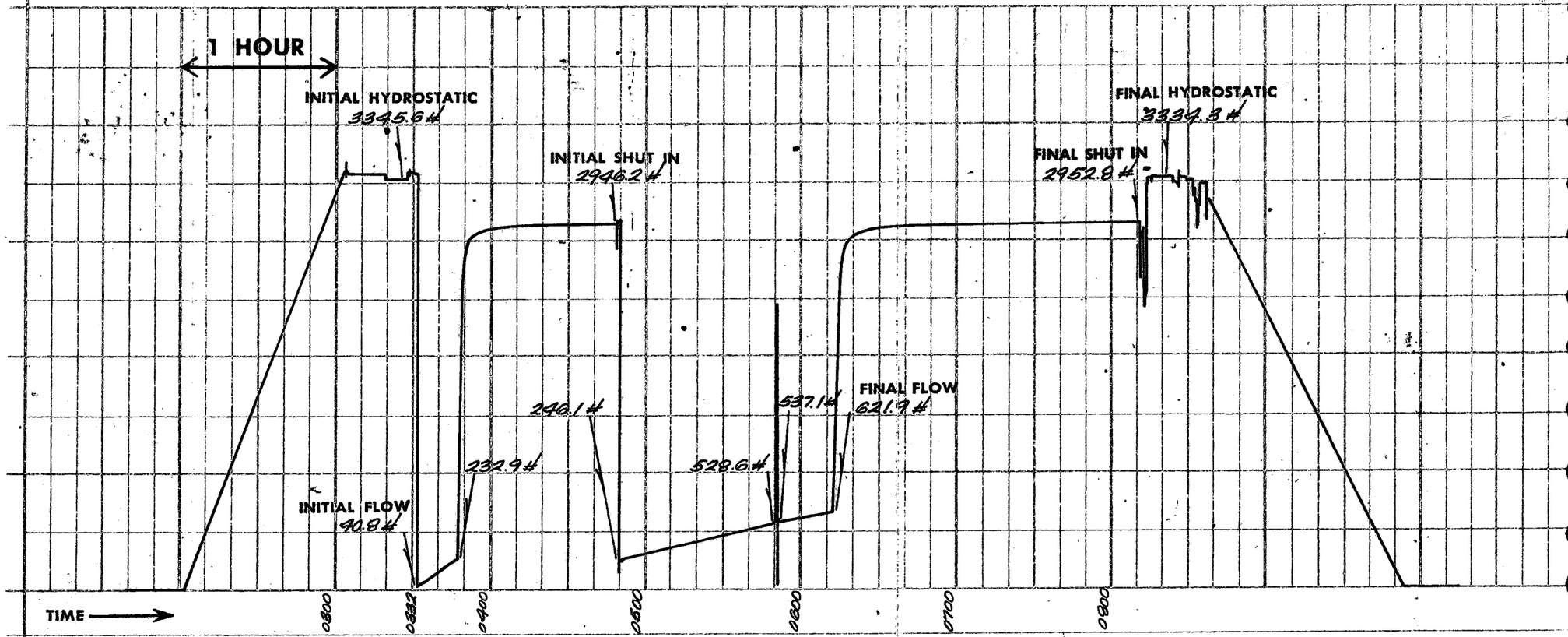
Field Report No: 13801 D

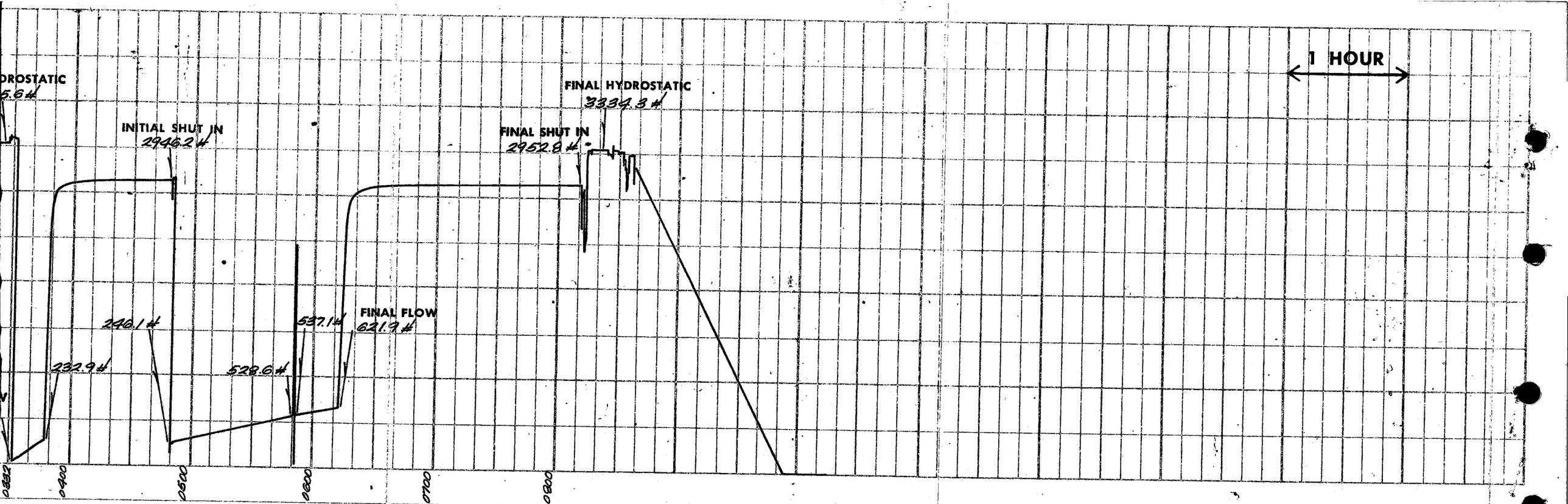
Instrument:
Number J-1237

Capacity 4700 p.s.i.

Depth 6862 ft.

*a continuous tracing of the original chart




DROSTATIC
5.6#
INITIAL SHUT IN
2946.2#
FINAL HYDROSTATIC
3334.3#
FINAL SHUT IN
2952.8#
1 HOUR
240.1#
232.9#
537.1#
528.6#
FINAL FLOW
621.9#
0400
0450
0500
0550
0600
0650
0700
0750
0800

JOHNSTON
Schlumberger

SURFACE INFORMATION

Description (Rate of Flow)	Time	Pressure (P.S.I.G.)	Surface Choke
Opened Tool	0612	–	–
PACKER SEAT FAILURE			
RE-CYCLED TOOL	0620	–	–
OPENED TOOL	0622	–	–
MOVED UP HOLE TEN FEET			
RE-CYCLED TOOL	0635	–	–
RE-OPENED TOOL	0637	–	–
PACKER SEAT FAILURE			
PULLED PACKER LOOSE	0938	–	–

Cushion Type	Amount	Pressure	Bottom Choke
–	–	–	Size 15/16''

MUD DATA

Mud Type L.S.N.D. Wt. 9.3
Viscosity 52 Water Loss 8.4 C.C.
Resist. of Mud 4.1 @ 62 °F; of Filtrate 3.7 @ 62 °F
Chloride Content 600 PPM

EQUIPMENT & HOLE DATA

Type Test M.F.E. SELECTIVE ZONE STRADDLE
Formation Tested HUMBUG /OPEN HOLE
Elevation 6776 K.B. Ft.
Net Productive Interval – Ft.
Estimated Porosity – %
All Depths Measured From KELLY BUSHING
Total Depth 7148 Ft.
Main Hole/Casing Size 8 3/4''
Rat Hole/Liner Size –
Drill Collar Length 564' I.D. –
Drill Pipe Length 6104' I.D. –
Packer Depth(s) 6644 & 6650, 6730 Ft.

MULTI-FLOW EVALUATOR FLUID SAMPLE DATA

Sampler Pressure _____ P.S.I.G. at Surface
Recovery: Cu. Ft. Gas _____
cc. Oil _____
cc. Water _____
cc. Mud _____
Tot. Liquid cc. _____
Gravity _____ °API @ _____ °F.
Gas/Oil Ratio _____ cu. ft./bbl.

	RESISTIVITY	CHLORIDE CONTENT
Recovery Water	_____ @ _____ °F.	_____ ppm
Recovery Mud	_____ @ _____ °F.	
Recovery Mud Filtrate	_____ @ _____ °F.	_____ ppm
Mud Pit Sample	_____ @ _____ °F.	
Mud Pit Sample Filtrate	_____ @ _____ °F.	_____ ppm

RECOVERY DESCRIPTION	FEET	BARRELS	% OIL	% WATER	% OTHERS	API GRAVITY @ °F.	RESISTIVITY @ °F.	CHL. PPM
–						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	

Remarks: UNSUCCESSFUL TEST; PACKER SEAT FAILURE.

Address P.O. BOX 130; ROOSEVELT, UTAH 84066

(WILD CAT)
Company FLYING DIAMOND OIL CORPORATION Field LITTLE MOUNTAIN
Well GOVT. SHENANDOAH #1 Location SEC. 4 - 4S - 20E
Test Interval 6650' TO 6730' (UNSUCCESSFUL) Test # 3 Date 10-7-78

County UINTAH State UTAH
Technician WHEELER (ROCK SPRINGS) Test Approved By MR. JOHN W. CLARK

Field Report No. 16438 D
No. Reports Requested 10(9X'S)

JOHNSTON Schlumberger

BOTTOM HOLE PRESSURE AND TIME DATA

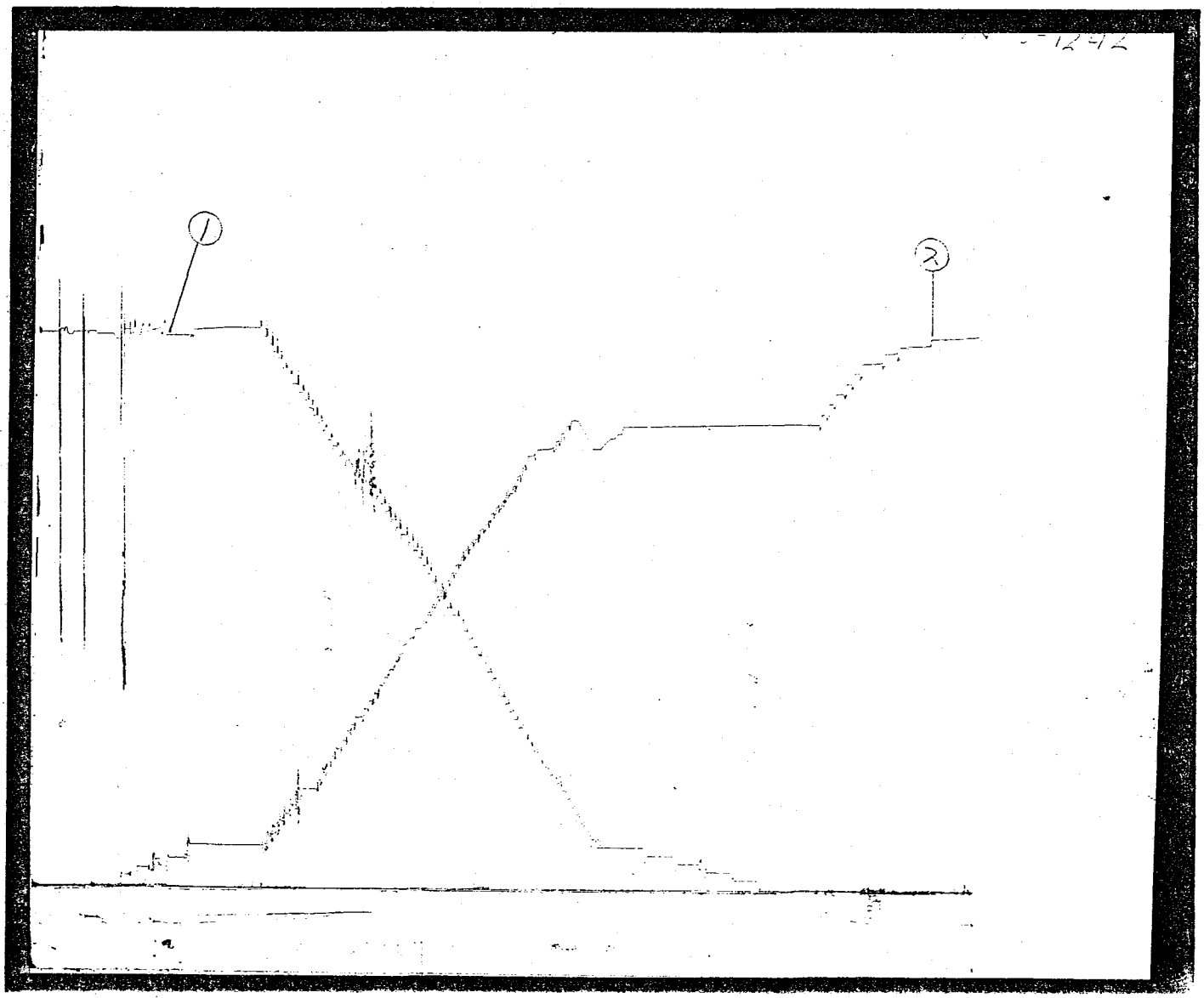
INSTRUMENT NO.: J-1242 CAPACITY (P.S.I.): 4700# DEPTH 6620 FT.

PORT OPENING: INSIDE BOTTOM HOLE TEMP.: 137°F. FIELD REPORT NO. 16438 D

DESCRIPTION	LABELED POINTS	PRESSURE (P.S.I.)	GIVEN TIME	COMPUTED TIME
INITIAL HYDROSTATIC MUD	1	3193.1		
INITIAL FLOW (1)				
INITIAL FLOW (2)				
INITIAL SHUT-IN				
SECOND FLOW (1)				
SECOND FLOW (2)				
SECOND SHUT-IN				
FINAL FLOW (1)				
FINAL FLOW (2)				
FINAL SHUT-IN				
FINAL HYDROSTATIC MUD	2	3199.7		

REMARKS: UNSUCCESSFUL TEST.

10+



JOHNSTON Schlumberger

BOTTOM HOLE PRESSURE AND TIME DATA

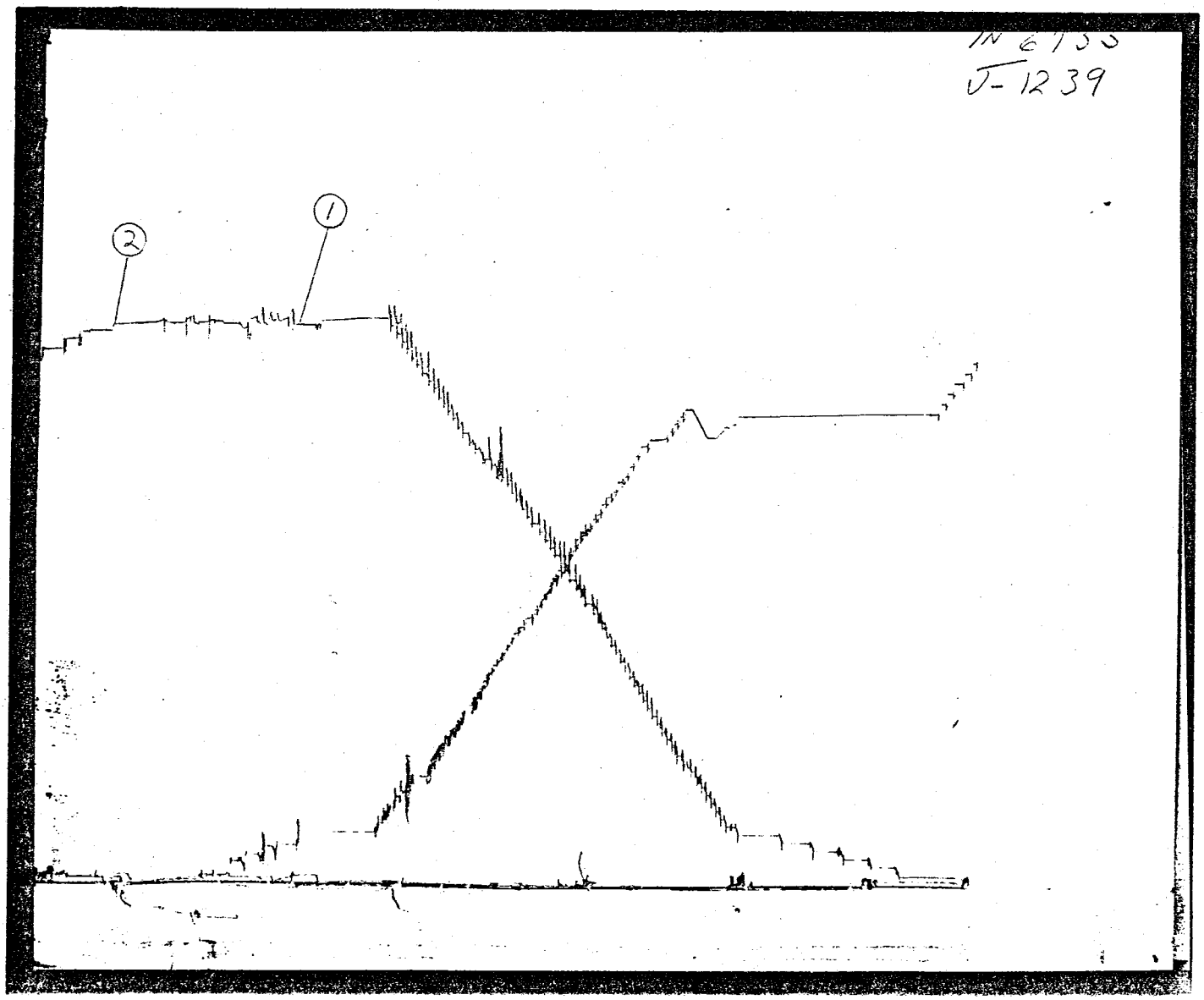
INSTRUMENT NO.: J-1239 CAPACITY (P.S.I.): 4700# DEPTH 6732 FT.

PORT OPENING: INSIDE BOTTOM HOLE TEMP.: 137°F. FIELD REPORT NO. 16438 D

DESCRIPTION	LABELED POINTS	PRESSURE (P.S.I.)	GIVEN TIME	COMPUTED TIME
INITIAL HYDROSTATIC MUD	1	3254.7		
INITIAL FLOW (1)				
INITIAL FLOW (2)				
INITIAL SHUT-IN				
SECOND FLOW (1)				
SECOND FLOW (2)				
SECOND SHUT-IN				
FINAL FLOW (1)				
FINAL FLOW (2)				
FINAL SHUT-IN				
FINAL HYDROSTATIC MUD	2	3250.9		

REMARKS: UNSUCCESSFUL TEST; BELOW STRADDLE.

10+



Phone
522-1206 Area 303

LYNES, INC.

Box 3600
Sterling, Colo. 80751

Operator Bow Valley Exploration, Inc. (U.S.) Well Name and No. Government-Shenandoah #1

Address See Distribution Ticket No. 13609

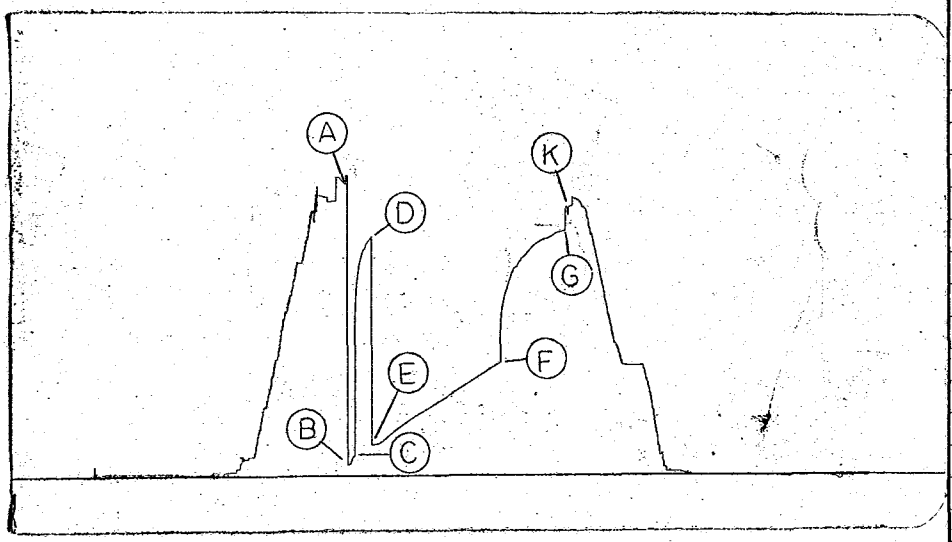
Date 10-8-78 DST No. 4

No. Final Copies 21

Contractor	Loffland Bros. Co.	Top Choke	1/4"
Rig No.	--	Bottom Choke	5/8"
Spot	SE-SE	Size Hole	8 3/4"
Sec.	4	Size Rat Hole	--
Twp.	4 S	Size & Wt. D. P.	4 1/2" 16.60
Rng.	20 E	Size Wt. Pipe	--
Field	Wildcat	I. D. of D. C.	2 1/4"
County	Uintah	Length of D. C.	497'
State	Utah	Total Depth	7148'
Elevation	6776' "K.B."	Interval Tested	6661-6730'
Formation	Humbug	Type of Test	Inflate Straddle

Flow No. 1	15 Min.
Shut-in No. 1	30 Min.
Flow No. 2	240 Min.
Shut-in No. 2	120 Min.
Flow No. 3	-- Min.
Shut-in No. 3	-- Min.
Bottom Hole Temp.	110
Mud Weight	9.5
Gravity	--
Viscosity	65

Tool opened @ 3:57 AM.



Outside Recorder

PRD Make Kuster K-3
No. 5804 Cap. 5500 @ 6671'

		Press	Corrected
Initial Hydrostatic	A		3344
Final Hydrostatic	K		3319
Initial Flow	B		130
Final Initial Flow	C		247
Initial Shut-in	D		2871
Second Initial Flow	E		379
Second Final Flow	F		1376
Second Shut-in	G		2936
Third Initial Flow	H		--
Third Final Flow	I		--
Third Shut-in	J		--

Lynes Dist.: Rock Springs, WY.
Our Tester: Charles Tuzicka
Witnessed By: Don Trujillo

Did Well Flow – Gas No Oil No Water No

RECOVERY IN PIPE: 3044' Water (Test was reversed circulated.)
Top Sample - R.W. 3.0 @ 70°F = 1700 ppm. chl.

REMARKS:

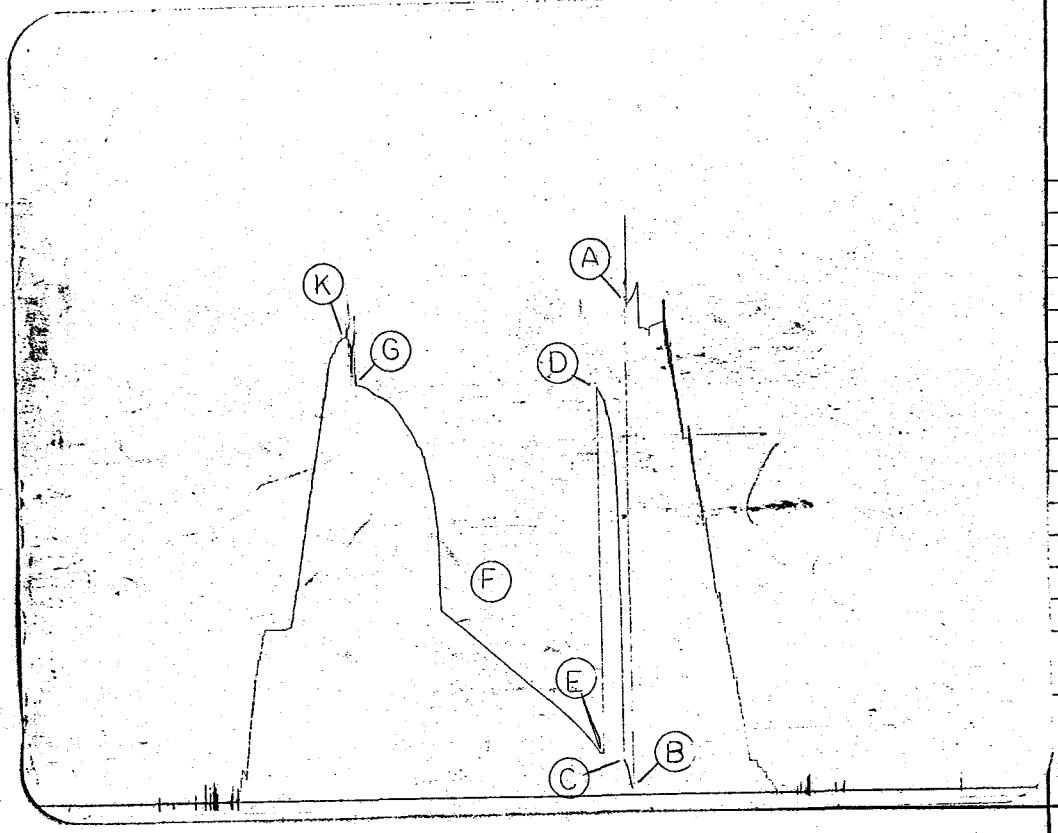
1st Flow - Tool opened with a weak blow, increased to bottom of bucket in 14 minutes and remained thru flow period.

2nd Flow - Tool opened with a weak blow, increased to a 15 ounce blow in 90 minutes, began to decrease to a 4 ounce blow in 160 minutes. Then increased to a 11 ounce blow at end of flow period.

Form 1

LYNES, INC.

Operator Bow Valley Exploration, Inc. (U.S.) Lease & No. Government-Shenandoah #1 DST No. 4

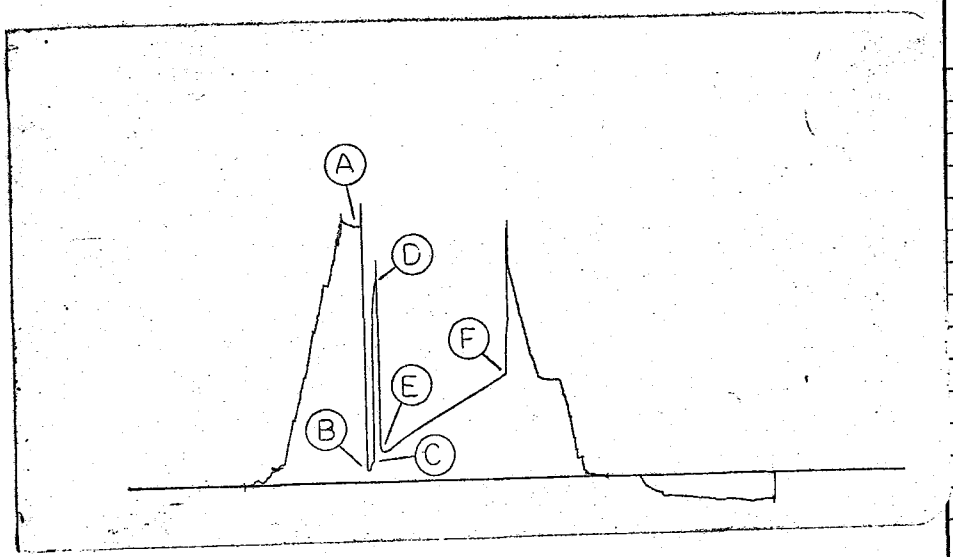


Outside Recorder

PRD Make Kuster AK-1

No. 2559 Cap. 5400 @ 6630'

Press		Corrected
Initial Hydrostatic	A	3324
Final Hydrostatic	K	3301
Initial Flow	B	113
Final Initial Flow	C	231
Initial Shut-in	D	2852
Second Initial Flow	E	359
Second Final Flow	F	1355
Second Shut-in	G	2916
Third Initial Flow	H	--
Third Final Flow	I	--
Third Shut-in	J	--
Pressure Below Bottom Packer Bled To		



Outside Recorder

PRD Make Kuster K-3

No. 12983 Cap. 5950 @ 6671'

Press		Corrected
Initial Hydrostatic	A	3364
Final Hydrostatic	K	*
Initial Flow	B	151
Final Initial Flow	C	264
Initial Shut-in	D	2578*
Second Initial Flow	E	380
Second Final Flow	F	1380
Second Shut-in	G	*
Third Initial Flow	H	--
Third Final Flow	I	--
Third Shut-in	J	--
Pressure Below Bottom Packer Bled To		

* Clock Stopped 13 minutes into the initial shut-in period & again at the end of the final flow period.

Form 3

LYNES INC.

REPORT #1181

WELL NAME - GOVERNMENT-SHANAN DOAH #1

WELL OPERATOR - BOW VALLEY EXPLORATION, INC.

DST NUMBER - 4

RECORDER NUMBER - 5804

FIRST SHUT IN PRESSURE

TIME(MIN) PHI	(T+PHI) /PHI	PSIG
.0	.0000	247
2.0	8.5000	2025
4.0	4.7500	2320
6.0	3.5000	2451
8.0	2.8750	2543
10.0	2.5000	2577
12.0	2.2500	2632
14.0	2.0714	2685
16.0	1.9375	2717
18.0	1.8333	2726
20.0	1.7500	2777
22.0	1.6818	2793
24.0	1.6250	2812
26.0	1.5769	2830
28.0	1.5357	2840
30.0	1.5000	2871

EXTRAPOLATION OF FIRST SHUT IN = 3267.97

LYNES INC.

REPORT #1181

WELL NAME - GOVERNMENT-SHANAN DOAH #1

WELL OPERATOR - BOW VALLEY EXPLORATION, INC.

DST NUMBER - 4

RECORDER NUMBER - 5804

SECOND SHUT IN PRESSURE

TIME(MIN) PHI	(T+PHI) /PHI	PSIG
.0	.0000	1376
8.0	32.8750	2178
16.0	16.9375	2336
24.0	11.6250	2462
32.0	8.9688	3529
40.0	7.3750	2602
48.0	6.3125	2655
56.0	5.5536	2717
64.0	4.9844	2770
72.0	4.5417	2806
80.0	4.1875	2832
88.0	3.8977	2848
96.0	3.6563	2874
104.0	3.4519	2908
112.0	3.2768	2924
120.0	3.1250	2936

FITTED LINE: LOG((TO+PHI)/PHI) = -.00160 PSIG + 5.17842

EXTRAPOLATION OF SECOND SHUT IN = 3246.21 M = 626.87

LYNES, INC.

Fluid Sample Report

Company: Bow Valley Exploration, Inc. (U.S.) Date: 10-8-78

Well Name & No.: Government-Shenandoah #1 Ticket No.: 13609

County: Uintah State: Utah

Test Interval: 6661-6730' DST No.: 4

Total Volume of Sampler: 2000 cc.

Total Volume of Sample: 2000 cc.

Pressure in Sampler: 0 psig

Oil: None cc.

Water: 2000 cc.

Mud: None cc.

Gas: None cu. ft.

Other: None

R.W. 3.0 @ 75°F = 1700 ppm. chl.

Resistivity

Make Up Water 10.0 @ 50°F of Chloride Content 725 ppm.

Mud Pit Sample 2.5 @ 60°F of Chloride Content 2550 ppm.

Gas/Oil Ratio _____ Gravity _____ °API @ _____ °F

Where was sample drained on location.

Remarks:

FORM 5

LYNES, INC.

Distribution of Final Reports

Operator Bow Valley Exploration, Inc. (U.S.) Well Name and No. Government-Shenandoah #1

Original & 2 copies: Bow Valley Expl., Inc., 1700 Broadway, Suite 900, Denver, CO. 80290 ATTN: G.K. Bailey

1 copy: Bow Valley Expl., Inc., 1700 Broadway, Suite 900, Denver, CO. 80290 ATTN: Jack Knight

1 copy: Bow Valley Expl., Inc., 1700 Broadway, Suite 900, Denver, CO. 80290 ATTN: H.P. McLish

2 copies: C & K Petroleum,Inc., 1600 Broadway, Suite 1700, Denver, CO. 80202 ATTN: Del Wiegand

2 copies: Crown Central Petroleum, Corp., 1002 Wilco Bldg., Midland, TX. 79701 ATTN: Lynn Lott

1 copy: Davoil, Inc., Box 12507, Fort Worth, TX. 76116 ATTN: Ken Smith

1 copy: Seneca Oil Co., 3013 N.W. 59th St. Oklahoma City, OK. 73112 ATTN: Ted C. Fowler

1 copy: Holder & Peckler, Suite 221 Centennial Bldg., 1645 Court Place, Denver, CO. 80202

1 copy: Shenandoah Oil Co., 1500 Commerce Bldg., Fort Worth, TX. 76102 ATTN: Cullen Thomas

3 copies: U.S.G.S. 8440 Federal Bldg., Salt Lake City, Utah 84138 ATTN: E.W. Guynn

3 copies: Oil & Gas Cons. 1588 West North Temple, Salt Lake City, Utah 84116 ATTN: P. Driscoll

2 copies: Bow Valley Exploration (U.S.) Inc., Box 130, Roosevelt, Utah 84066 ATTN: E.B. Whicker

Form 6

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL [X] GAS WELL [ ] OTHER Drill nine seismic holes for sonic survey
2. NAME OF OPERATOR: FLYING DIAMOND OIL CORPORATION d/b/a BOW VALLEY EXPLORATION (U.S.) INC.
3. ADDRESS OF OPERATOR: 1700 Broadway, Suite 900, Denver, Colorado 80290
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface
632' FSL, 783' FEL, SEC 4-T4S-R20E
5. LEASE DESIGNATION AND SERIAL NO.: U36306
6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A
7. UNIT AGREEMENT NAME: N/A
8. FARM OR LEASE NAME: Government-Shenandoah
9. WELL NO.: 1
10. FIELD AND POOL, OR WILDCAT: Wildcat
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec.4-T4S-R20E SLM
12. COUNTY OR PARISH: Uintah
13. STATE: Utah
14. PERMIT NO.:
15. ELEVATIONS (Show whether DF, RT, GR, etc.): KB 6776.5

16. **Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data**

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[X]	(Other)			
(Other)							

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

This well has been drilled to a total depth of 7149'. Formation Tops are as follows:

MORRISON - 1565'
ENTRADA - 2739'
NAVAJO - 3002'
WEBER (TOP 510' FAULTED OUT) - 4900'
MANNING CANYON - 6489'
HUMBUG - 6640'

Drill Stem Tests were taken as follows:

2251-2390, 4868-4983, 6661-6730, 6850-6925

All tests recovered fresh water (400 ppm cl's) and no shows of oil or gas.

(SEE BACK PAGE)

RECEIVED OCT 12 1978 DIVISION OF OIL, GAS, & MINING

APPROVED BY THE DIVISION OF OIL, GAS, AND MINING
DATE: Oct. 18 1978
BY: [signature]

18. I hereby certify that the foregoing is true and correct

SIGNED [signature] John W. Clark TITLE Division Engineer DATE 10-10-78

(This space for Federal or State office use)

APPROVED BY ______ TITLE ______ DATE ______
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

It proposed to plug back and directionally drill to attempt to penetrate the Phosphoria and Upper Weber which were faulted out in this well. Plug back will be as follows:

1. Spot 75 sx Class "G" cement plug from 5719' to 5553' (Bottom Weber Formation)

2. Spot 75 sx Class "G" cement plug from 4995'-4830' (Top Weber Formation)

3. Spot 375 sx Class "G" cement plug from 2641'-2191'.

4. Kick-off at 2300' and directionally drill to a point 750' N45°E of the original location at a true vertical depth of 4200'. Point will be 253' FEL and 1162' FSL.

EXPECTED FORMATION TOPS:

FORMATION	TVD
PHOSPHORIA	4125'
WEBER	4250'

Instructions

General: This form is designed for submitting proposals to perform certain well operations, and reports of such operations when completed, as indicated, on Federal and Indian lands pursuant to applicable Federal law and regulations, and, if approved or accepted by any State, on all lands in such State, pursuant to applicable State law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 17: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by local Federal and/or State offices. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to top of any left in the hole; method of closing top of well; and date well site conditioned for final inspection looking to approval of the abandonment.

GPO 680-379

CORE ANALYSIS RESULTS FOR

BOW VALLEY EXPLORATION (US) INCORPORATED

GOVERNMENT SHENANDOAH NO. 1-X

WILDCAT

UINTAH COUNTY, UTAH

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS

BOW VALLEY EXPL. (U.S.) INC.
GOVERNMENT SHENANDOAH NO.1-X
WILDCAT
UINTAH COUNTY

FORMATION : PHOSPHORIA
DRLG. FLUID: WATER BASE MUD
LOCATION : SE SE SEC. 4-T4S-R20E
STATE : UTAH

DATE : 10-23-78
FILE NO. : RP-2-5688
ANALYSTS : RG:RM
ELEVATION: 6758' GL

CONVENTIONAL CORE ANALYSIS

SAMP. NO.	DEPTH	PERM. TO AIR (MD) HORZ.	VERTICAL	POR. FLD.	FLUID SATS. OIL	WATER	GR. DNS.	DESCRIPTION
	4432-4452							SHALE - NO ANALYSIS
	4452-4477							ANHY - NO ANALYSIS
67	4477-78	0.27	0.19	4.1	5.3	53.3		DOLO GY VFX
68	4478-79	0.17	0.03	7.2	0.0	53.1		DOLO GY VFX
69	4479-80	0.02	0.07	4.5	12.3	59.2	VF	DOLO GY VFX
70	4480-81	4.1	0.20	7.0	14.0	66.8	VF	DOLO GY VFX
71	4481-82	7.6	1.3	13.2	1.6	78.2		DOLO GY VFX CHERTY
72	4482-83	6.6	1.6	11.0	8.6	76.7		DOLO GY VFX SL/VUGGY
73	4483-84	*	1.2	13.6	5.5	77.9	VF	DOLO GY VFX SL/VUGGY
74	4484-85	20	0.75	9.1	8.3	70.8	VF	DOLO GY VFX ANHY SL/VUGGY
75	4485-86	0.07	8.9 F	10.1	7.3	69.2		DOLO GY VFX SL/VUGGY
76	4486-87	0.05	0.14	7.3	10.3	68.0	VF	DOLO GY VFX
77	4487-88	3.1	*	9.9	7.6	75.9	VF	DOLO GY VFX
78	4488-89	0.04	0.06	11.4	17.2	58.1	VF	DOLO GY VFX
79	4489-90	52	16	11.1	14.9	67.1	VF	DOLO GY VFX SL/VUGGY
80	4490-91	3.2	11	21.8	7.0	78.9	VF	DOLO GY VFX SL/VUGGY
81	4491-92	1.5	0.26	16.6	9.7	79.2	VF	DOLO GY VFX SL/VUGGY
82	4492-93	0.33	0.06	14.0	10.2	73.2	VF	DOLO GY VFX ANHY
83	4493-94	0.35	0.45	12.3	11.1	74.2	VF	DOLO GY VFX SL/VUGGY
84	4494-95	15	9.0	16.0	8.7	76.8	VF	DOLO GY VFX SL/VUGGY
85	4495-96	12	0.03	7.4	7.2	75.2		DOLO GY VFX ANHY SL/VUGGY
86	4496-97	0.07	0.03	14.7	9.8	73.1		DOLO GY VFX
87	4497-98	0.37	2.6	6.8	18.9	63.0		DOLO GY VFX
88	4498-99	0.02	0.02	3.7	26.9	53.8		DOLO GY VFX
89	4499 -0	0.06	0.03	11.7	10.8	66.3		DOLO GY VFX

*UNSUITABLE FOR PERMEABILITY MEASUREMENT
F = FRACTURED PERMEABILITY PLUG
VF = VERTICAL FRACTURE

BOW VALLEY EXPL. (U.S.) INC.
GOVERNMENT SHENANDOAH NO.1-X
WILDCAT
UINTAH COUNTY

FORMATION : PHOSPHORIA/WEBER
DRLG. FLUID: WATER BASE MUD
LOCATION : SE SE SEC. 4-T4S-R20E
STATE : UTAH

DATE : 10-23-78
FILE NO. : RP-2-5688
ANALYSTS : RG:RM
ELEVATION: 6758' GL

CONVENTIONAL CORE ANALYSIS

SAMP. NO.	DEPTH	PERM. TO AIR (MD) HORZ.	VERTICAL	POR. FLD.	FLUID SATS. OIL	WATER	GR. DNS.	DESCRIPTION
90	4500 -1	0.03	0.09	13.1	7.0	65.1		DOLO GY VFX SL/VUGGY
91	4501 -2	0.02	0.02	6.1	16.0	60.5		DOLO GY VFX SL/VUGGY
92	4502 -3	0.02	1.8 F	4.0	24.9	55.4		DOLO GY VFX SL/VUGGY
93	4503 -4	0.04	0.03	3.2	7.0	62.6		DOLO GY VFX SL/VUGGY
	4504-4527							DRILLED
	4527-4560							NO ANALYSIS - REQUEST OF CLIENT
94	4560-61	0.02	0.02	6.8	1.7	88.1		DOLO DRK GY MED ANHY SHLY
	4561-4564							NO ANALYSIS - REQUEST OF CLIENT
95	4564-65	21 F	0.04	6.2	0.0	88.4		DOLO DRK GY MED ANHY PYR VUGS SHLY
	4565-4569							NO ANALYSIS - REQUEST OF CLIENT
96	4569-70	0.22	1.6	6.3	0.0	90.4		DOLO DRK GY MED ANHY SHLY
	4570-4573							NO ANALYSIS - REQUEST OF CLIENT
97	4573-74	0.01	0.01	6.9	1.7	89.1		DOLO DRK GY FN ANHY PYR SHLY
	4574-4578							NO ANALYSIS - REQUEST OF CLIENT
98	4578-79	0.01	0.02	3.9	0.0	85.8		DOLO GY VFX PYR CALC FRAC SHLY
	4579-4581							NO ANALYSIS - REQUEST OF CLIENT
99	4581-82	0.04	0.03	2.6	0.0	57.4		DOLO GY VFX CALC FRAC
	4582-4583							NO ANALYSIS - REQUEST OF CLIENT
100	4583-84	0.06	0.05	4.8	0.0	38.2		DOLO GY VFX CALC FRAC

F = FRACTURED PERMEABILITY PLUG
VF = VERTICAL FRACTURE

October 24, 1978

MEMO TO FILE

Re: FLYING DIAMOND
Well No. Gov't Shennendoah #1
632' FSL 783' FEL
Sec. 4, T. 4S, R. 20E
Uintah, County, Utah

Flying Diamond was given permission to plug and abandon the above well. The total depth was reached at 4,720'.

The casing program: 9 5/8" at 2,251'
13 5/8" at 100'

Cement from top to bottom

Formation tops:

Morrison	1565'
Entrada	2739'
Navajo	3002'
Fosforia	4445'
Weber	4598'

Plugs set as follows 150 sack plug from 4295 - 4685
75 sack plug from 2805 - 3000
75 sack plug from 2153 - 2348
10 sack plug at surface

Dry hole marker erected

CLEON B. FEIGHT
DIRECTOR

CBF/lw
cc: U.S. Geological Survey

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL [X] GAS WELL [ ] OTHER

2. NAME OF OPERATOR: Flying Diamond Oil Corporation d/b/a Bow Valley Exploration (U.S.) Inc.

3. ADDRESS OF OPERATOR: 1700 Broadway, Suite 900, Denver, Colorado 80290

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface: 632' FSL, 783' FEL, SEC 4-T4S-R20E

5. LEASE DESIGNATION AND SERIAL NO.: U36306

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A

7. UNIT AGREEMENT NAME: N/A

8. FARM OR LEASE NAME: Government-Shenandoah

9. WELL NO.: 1(-X)?

10. FIELD AND POOL, OR WILDCAT: Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: SEC 4-T4S-R20E SLM

RECEIVED
NOV 13 1978
DIVISION OF OIL, GAS, & MINING

14. PERMIT NO.	15. ELEVATIONS (Show whether DF, RT, GR, etc.)	12. COUNTY OR PARISH	13. STATE
	KB 6776.5	Uintah	Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other)			[ ]
(Other)			[ ]	(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

CORE ANALYSIS RESULTS FOR THE ABOVE CAPTIONED WELL ENCLOSED.

18. I hereby certify that the foregoing is true and correct

SIGNED D. K. Bailey (DKB) TITLE Mgr., Drilling & Production DATE 11-8-78

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

CORE LABORATORIES, INC. *Petroleum Reservoir Engineering*

COMPANY BOW VALLEY EXPL. (U.S.) INC. FIELD WILDCAT FILE RP-2-5688

WELL GOVERNMENT SHENANDOAH NO. 1-X COUNTY UINTAH DATE 10-23-78

LOCATION SE SE SEC. 4-T4S-R20E STATE UTAH ELEV. 6758' GL

CORE-GAMMA CORRELATION

VERTICAL SCALE: 5" = 100'

CORE-GAMMA SURFACE LOG
(PATENT APPLIED FOR)

GAMMA RAY
RADIATION INCREASE →

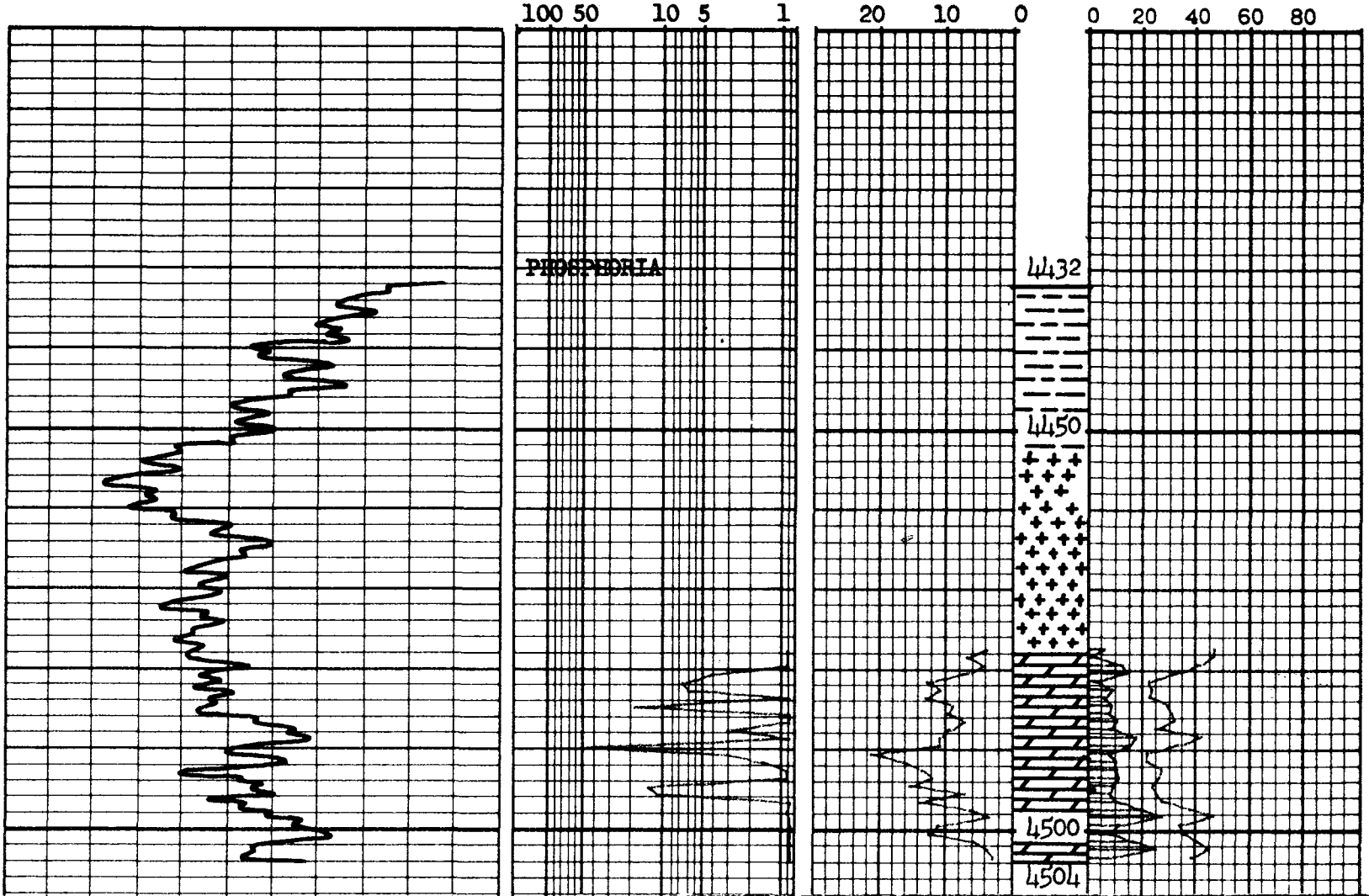
COREGRAPH

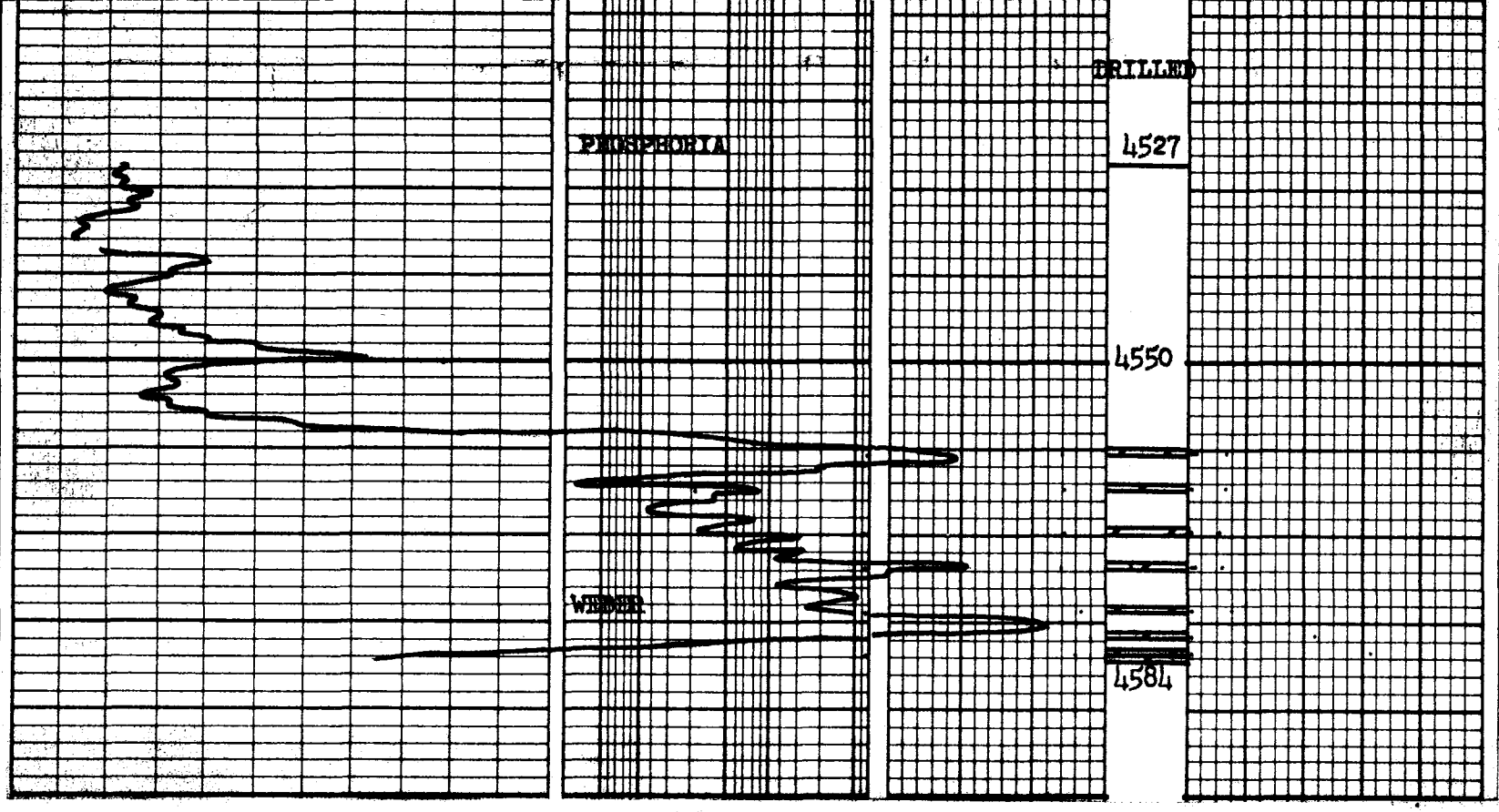
TOTAL WATER
PERCENT TOTAL WATER
80 60 40 20 0

PERMEABILITY
MILLIDARCYS
100 50 10 5 1

POROSITY
PERCENT
20 10 0

OIL SATURATION
PERCENT PORE SPACE
0 20 40 60 80





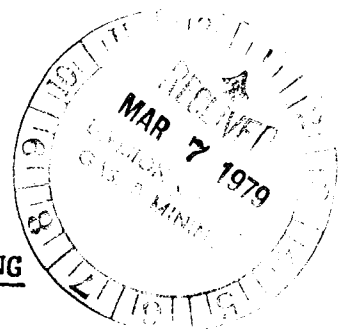
INTERPRETATION OF DATA

4477.0-4504.0 Feet - Essentially water productive.
4560.0-4584.0 Feet - Non productive at analyzed points.

These recovery estimates represent theoretical maximum values for solution gas and water drive. They assume that production is started at original reservoir pressure; i.e., no account is taken of production to date or of prior drainage to other areas. The effects of factors tending to reduce actual ultimate recovery, such as economic limits on oil production rates, gas-oil ratios, or water-oil ratios, have not been taken into account. Neither have factors been considered which may result in actual recovery intermediate between solution gas and complete water drive recoveries, such as gas cap expansion, gravity drainage, or partial water drive. Detailed predictions of ultimate oil recovery to specific abandonment conditions may be made in an engineering study in which consideration is given to overall reservoir characteristics and economic factors.

FILE IN QUADRUPLICATE
FORM OGC-8-X

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING
1588 West North Temple
Salt Lake City, Utah 84116



REPORT OF WATER ENCOUNTERED DURING DRILLING

Well Name & Number: Gov't Shenandoah #1

Operator: Flying Diamond Oil Corp. Address: P.O. Drawer 130 Roosevelt, Ut

Contractor: Loffland Brothers Address: Denyer, Colorado

Location SE 1/4 SE 1/4; Sec. 4 T. 4 N/S, R. 20 E/W; Uintah County.

Water Sands:

	Depth: From-	To-	Volume: Flow Rate or Head	Quality: Fresh or Salty
1.	2251	2390	650' (DST#1)	Fresh
2.	4868	4983	1650' (DST#2)	Fresh
3.	6850	6925	970' (DST#3)	Fresh
4.	6661	6730	3044' (DST#4)	Fresh
5.				

(Continue on Reverse Side if Necessary)

Formation Tops: Carmel 2904, Nugget 3024, Phosphoria 4456

Remarks:

NOTE: (a) Upon diminishing supply of forms, please inform this office.
(b) Report on this form as provided for in Rule C-20, General Rules and Regulations and Rules of Practice and Procedure.
(c) If a water analysis has been made of the above reported zone, please forward a copy along with this form.

DRILL STEM TESTS

DST No. 1

Interval 2251'-2390'.
op. 30" with $\frac{1}{4}$ blow in H_2O, increase to 14".
151 60"
Op. 60" opened with 1" H_2O increasing to 6",
decreased to 1"
FSI 90"

Recovered 655' mud
1HH 1064
1st period flow: 1F 405
FF 188.7
SI 337

2nd period flow: 1F 822
FF 188.7
SI 337

FHH 1051

DST No. 2

Interval 4868-4983'
op. 30" SI 1 hr. op. 1 hr. SI 1$\frac{1}{2}$ hrs.

Rec. 1650' wtr. 0.95 res. at 70° w/
450 ppm Chl. Plt mud 1.0 at 70°

1HH 2310
1F 12 to 525
1SI 2120
FF 534-1000'
FSI 2130
FHH 2310

DST No. 3

Interval 6850-6925'
IF 15", SI 60", FF80", SI 2 hrs
1HH 3381
1F 35-225
1SI 2945
FF 196-623
FSI 2955
FHH 3353

DST No. 3, cont.

Rec. 970' fluid
200' WCM
770' MCW
BHT 104'
CL-2400c 450 ppm
Rec. 4.0 at 70°

DST No. 4 (6661-6730)

Open: 15" Shut In: 30"
Open: 240" Shut In: 120"
IHP: 3582 FHP 3405

First Flow: (15")
IF: 42 FF:266 SI (30") 2854

Second Flow: (240")
IF: 294 FF: 1299 SI (120") 2908

Recovered: 3044' fresh wtr
Sample Chamber: 2000 cc fresh wtr
BHT: 110°

set plugs top and bottom of weber.
set plug at foot of csg. for whipstock.

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING
1588 West North Temple
Salt Lake City, Utah 84116
(801) 533-5771

June 6, 1979

Bow Valley Petroleum Inc.
1700 Broadway, Suite 900
Denver, Colorado 80290

Re: Well No. Gov't.-Shenandoah #1
Sec. 4, T. 4S, R. 20E,
Uintah County, Utah

Gentlemen:

This letter is to advise you that the Well Completion or Recompletion Report and Log for the above referred to well is due and has not been filed with this office as required by our rules and regulations.

Please complete the enclosed Form OGC-3, in duplicate, and forward them to this office as soon as possible.

Thank you for your cooperation relative to the above.

Very truly yours,

DIVISION OF OIL, GAS, AND MINING

Kathy Ostler

KATHY OSTLER
RECORDS CLERK

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.
U-36306

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
NA

7. UNIT AGREEMENT NAME
NA

8. FARM OR LEASE NAME
Government-Shenandoah

9. WELL NO.
1

10. FIELD AND POOL, OR WILDCAT
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec4-T4S-R2OE, SLM

12. COUNTY OR PARISH
Uintah

13. STATE
Utah

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

RECEIVED
MAR 08 1979

RECEIVED
JUL 16 1979
DIVISION OF OIL, GAS, & MINING

BOW VALLEY PETROLEUM INC.

1. OIL WELL [X] GAS WELL [ ] OTHER

2. NAME OF OPERATOR
Bow Valley Petroleum Inc.

3. ADDRESS OF OPERATOR
1700 Broadway, Suite 900, Denver, Colorado 80290

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.
See also space 17 below.)
At surface
632' FSL, 783 FEL, 4-T4S-R2OE

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[X]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other)			
(Other)				(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

Bow Valley has plugged the subject wellbore as follows.

75 sx Class G cement 5719-5533
75 sx Class G cement 4995-4830
375 sx Class G w/2% CaCl
& 10#/sx 40-60sd 2641-2191'

All areas between plugs are filled with 9.0 PPG Drilling Mud. The wellbore was then deviated N45°E from 2300' and drilling resumed. The targets are the Phosphoria and Weber Formations which were filled out in the first wellbore.

18. I hereby certify that the foregoing is true and correct

SIGNED E. B. Whicker TITLE Roosevelt Dist. Supt. DATE March 6, 1979
E. B. Whicker

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

RECEIVED
MAR 08 1979
BOW VALLEY PETROLEUM INC.
JUL 16 1979
DIVISION OF OIL, GAS, & MINING

1. OIL WELL [X] GAS WELL [ ] OTHER

2. NAME OF OPERATOR
Bow Valley Petroleum, Inc.

3. ADDRESS OF OPERATOR
1700 Broadway, Suite 900, Denver, Colorado 80290

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface
Section 4, Township 4 South, Range 20 East

5. LEASE DESIGNATION AND SERIAL NO.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
NA

7. UNIT AGREEMENT NAME
NA

8. FARM OR LEASE NAME
Govrnment-Shenandoah#1x

9. WELL NO.

10. FIELD AND POOL, OR WILDCAT

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA

14. PERMIT NO.	15. ELEVATIONS (Show whether DF, RT, GR, etc.)	12. COUNTY OR PARISH	13. STATE

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[X]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other)			
(Other)			[ ]	(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

The subject well has been drilled to 4576' TVD and deviated to 21° from vertical N 38°, 4' E.
No commercial hydrocarbons were encountered.
The well has been plugged as follows.

150 sx Class H cement 4687-5297'
75 sx Class H cement 3014-2819'
75 sx Class H cement 2312-2150'
15 sx Class H cement in top of 9 5/8 CSG.

Casing left in hole as follows:

13 5/8 @ 100 cemented to surface.
9 5/8 @ 2251 cemented to surface.

No marker to be set per BLM requirements.
Cleanup and surface resoration is suspended due to weather, and will be completed in early summer, 1979.

18. I hereby certify that the foregoing is true and correct

SIGNED E. B. Whicker TITLE Roosevelt Dist. Supt. DATE March 6, 1979
E. B. Whicker

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL [X] GAS WELL [ ] OTHER

2. NAME OF OPERATOR: Bow Valley Petroleum Inc.

3. ADDRESS OF OPERATOR: 1700 Broadway, Suite 900, Denver, Colorado 80290

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 632' FSL, 783 FEL, 4-T4S-R20E

5. LEASE DESIGNATION AND SERIAL NO.: U-36306

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NA

7. UNIT AGREEMENT NAME: NA

8. FARM OR LEASE NAME: Government-Shenandoah

9. WELL NO.: 1

10. FIELD AND POOL, OR WILDCAT: Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec-4-T4S-R20E, SLM

12. COUNTY OR PARISH: Uintah

13. STATE: Utah

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[X]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other)			
(Other)			[ ]	(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

On August 27, 1979 the subject location was recontoured, reseeded, and approved by Bill Arnold of the BLM.

The road has not yet been reclaimed. Bow Valley wishes to hold this road until Summer, 1980, pending possible additional drilling in the area.

RECEIVED
NOV 5 1979
DIVISION OF OIL, GAS & MINING

18. I hereby certify that the foregoing is true and correct

SIGNED E. B. Whicker E.B. Whicker TITLE Division Engineer DATE 11/2/79

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING
1588 West North Temple
Salt Lake City, Utah 84116
(801) 533-5771

Noverber 9, 1979

Bow Valley Petroleum Inc.
1700 Broadway, Suite 900
Denver Colo.
80290

Well# Gov't. Shenandoah #1
Sec. 4, T. 4S. R. 20E,
Uintah County, Utah
SECOND NOTICE

Gentleman:

This letter is to advise you that the Well Completion or Recompletion Report and log for the above referred to well is due and has not been filed with this office as required by our rules and regulations.

Please complete the enclosed Form OGC-3, in duplicate, and forward them to this office as soon as possible.

Thank you for your cooperation relative to the above.

Very truly yours,

DIVISION OF OIL, GAS, AND MINING

Debbie Beauregard
DEBBIE BEAUREGARD
CLERK-TYPIST

Form 9-330
(Rev. 5-63)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE (See other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R355.5.

16

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ DRY ☒ Other

b. TYPE OF COMPLETION: NEW WELL ☐ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other P&A

2. NAME OF OPERATOR
Bow Valley Petroleum, Inc.

3. ADDRESS OF OPERATOR
1700 Broadway, Suite 900, Denver CO, 80290

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface 632' FSL, 783' FEL (SE, SE)
At top prod. interval reported below N/A
At total depth 1,109' FSL, 370' FEL

5. LEASE DESIGNATION AND SERIAL NO.
U 36306

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
N/A

7. UNIT AGREEMENT NAME
N/A

8. FARM OR LEASE NAME
Govt Shenandoah

9. WELL NO.
1

10. FIELD AND POOL, OR WILDCAT
Wildcat

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA
SEC 4, T4S, R20E, SLM

14. PERMIT NO.	DATE ISSUED	12. COUNTY OR PARISH	13. STATE
API 43-047-30487	9-7-78	Uintah	Utah

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (*Ready to prod.*)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
8-16-78	10-5-78	N/A	6758 GR, 6776½ KB	N/A

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
7,149 & 7,110	2,370 & 2,369'	N/A	→	All	None

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*
None

25. WAS DIRECTIONAL SURVEY MADE
Yes

26. TYPE ELECTRIC AND OTHER LOGS RUN
BHS-GR, CNL-FDC-GR, DILL, Dipmeter

27. WAS WELL CORED
Yes

28. CASING RECORD (*Report all strings set in well*)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13-3/8		313	17¼	250 sx. Class "G"	None
9-5/8	40#	2,251	12¼	625 "Lite" 200 "G"	None

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)

31. PERFORATION RECORD (*Interval, size and number*)

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (*Flowing, gas lift, pumping—size and type of pump*)	WELL STATUS (*Producing or shut-in*)

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)

34. DISPOSITION OF GAS (*Sold, used for fuel, vented, etc.*)

TEST WITNESSED BY

35. LIST OF ATTACHMENTS
DST & Core Summaries

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED E. B. Whicker TITLE Division Engineer DATE 11-27-79

*(See Instructions and Spaces for Additional Data on Reverse Side)

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: *"Sacks Cement":* Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

37. SUMMARY OF POROUS ZONES:
SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
Morrison	2,210	2,390	DST #1
Moenkopi	4,868	4,983	DST #2
Moenkopi	4,943	4,983	Core #1
Deseret	6,865	6,869	Core #2
	6,850	6,925	DST #3
	6,661	6,730	DST #4

38. GEOLOGIC MARKERS

NAME	TOP MEAS. DEPTH	TOP TRUE VERT. DEPTH
Tertiary Allvm.	Surface	
Mancos	40	
Frontier	1,084	1,084
Mowry	1,286	1,286
Dakota	1,440	1,440
Morrison	1,566	1,566
Curtis	2,500	2,499
Entrada	2,666	2,665
Carmel	2,860	2,858
Navaho	3,030	3,028
Chinle	3,870	3,864
Shinerump	4,116	4,109
Moenkopi	4,163	4,156
Fault		
Morgan	5,620	5,598
Manning Cyn.	6,506	6,474
Humbug	6,620	6,587
Deseret	6,850	6,815

U.S. GOVERNMENT PRINTING OFFICE: 1963—O-683636
837-497

Form 9-330
(Rev. 5-63)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE (See other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R355.5.

RECEIVED
DEC 3 1979
OIL, GAS, & MINING

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ DRY ☒ Other

b. TYPE OF COMPLETION: NEW WELL ☐ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other P&A

2. NAME OF OPERATOR: Bow Valley Petroleum, Inc.

3. ADDRESS OF OPERATOR: 1700 Broadway, Suite 900, Denver, CO 80290

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface: 632' FSL, 783' FEL (SE,SE)
At top prod. interval reported below
At total depth: 1,225 FSL, 331' FEL

5. LEASE DESIGNATION AND SERIAL NO.: U 36306
6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A
7. UNIT AGREEMENT NAME: N/A
8. FARM OR LEASE NAME: Gov't Shenandoah
9. WELL NO.: 1X
10. FIELD AND POOL, OR WILDCAT: Wildcat
11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: SEC 4,T4S, R20E, SLM

14. PERMIT NO.	DATE ISSUED	12. COUNTY OR PARISH	13. STATE
API 43-047-30487	9-7-78	Uintah	Utah

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (*Ready to prod.*)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
8-16-78	10-24-78		6758 GR, 6776½ KB	

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
4,740 & 4,606			→	All	None

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*: None

25. WAS DIRECTIONAL SURVEY MADE: Yes

26. TYPE ELECTRIC AND OTHER LOGS RUN: BHS-GR, CNL-FDC-GR, DILL, Dipmeter

27. WAS WELL CORED: Yes

28. CASING RECORD (*Report all strings set in well*)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13-3/8		213	17¼	250 "G"	
9-5/8	40#	2,251	12¼	625 "Lite", 200 "G"	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)

31. PERFORATION RECORD (*Interval, size and number*)

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (*Flowing, gas lift, pumping—size and type of pump*)	WELL STATUS (*Producing or shut-in*)

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)

34. DISPOSITION OF GAS (*Sold, used for fuel, vented, etc.*)

TEST WITNESSED BY

35. LIST OF ATTACHMENTS: Core Summary

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED E. B. Wheeler TITLE Division Engineer DATE 11-27-79

*(See Instructions and Spaces for Additional Data on Reverse Side)

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: *"Sacks Cement":* Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

37. SUMMARY OF POROUS ZONES:
SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
Phosphoria	4,432	4,492	Core #3
Weber	4,492	4,504	Core #4
	4,529	4,589	Core #5

38. GEOLOGIC MARKERS

NAME	TOP	
	MEAS. DEPTH	TRUE VERT. DEPTH
Entrada	2666	2663
Carmel	2860	2854
Navajo	3028	3018
Fault		
Phosphoria	4425	4408
Weber	4590	4464

U.S. GOVERNMENT PRINTING OFFICE: 1963—O-683636
837-497

CORE DESCRIPTIONS

Core No. 1 - Cored 4943-4983, Rec. 60.0'

4943-45'	Sandstone, white; fine to medium grained, calcareous, hard, tite, clean, calcareous with frosted, sub-rounded grains.
4945-47'	Sandstone, as above, quartzitic, finely pyritic, calcareous.
4947-49'	Sandstone, white, calcareous, porous, clean, well sorted with clear to frosted, sub-rounded grains.
4949-51'	Sandstone, white, calcareous, hard, tite, fine to medium grained with smokey quartzitic grains, rare, sharp; in part, medium coarse grained.
4951-53'	Sandstone, as above, medium grained, calcareous.
4953-55'	Sandstone, as above, medium to medium coarse grained, calcareous, hard, tite.
4955-57'	Sandstone, as above, calcareous, well sorted, medium grained.
4957-59'	Sandstone, white, very fine grained to fine grained, slightly calcareous, hard, tite.
4959-61'	Sandstone, white, fine grained, hard, tite, non-calcareous, well sorted.
4961-65'	Sandstone, white, fine to medium fine grained, blocky, hard, sharp, non-calcareous.
4965-67'	Sandstone, grey to white, shaley, very fine grained, hard, tite, non-calcareous.
4967-69'	Shale, white, hard, siliceous, non-calcareous, very finely pyritic.
4969-71'	Sandstone, very fine grained, grading into siltstone, siliceous, hard, non-calcareous.
4971-75'	Sandstone, white, medium to medium fine grained, clear, calcareous, becoming slightly calcareous 73-75'
4975-77'	Sandstone, white, medium fine grained, well sorted, clean, calcareous, hard, tite.

Core Descriptions, Contd.

4977-79'	Sandstone, white, fine to medium grained, finely pyritic, hard, tite, calcareous.
4979-83'	Sandstone, white, fine to medium coarse grained, hard, tite, with some white limey streaks & with some brown coarse grained quartz grains, sub-rounded.

CORE DESCRIPTIONS

Core No. 2, Cored 6865-6925, Rec. 60.0'.

6865-67'	Sandstone, grey-white, calcareous, porous to tight, medium to coarse grained, poorly sorted, with sub-rounded to sub-angular grains, clear to frosted, with patchy to spotty very light brown oil stain with blue fluorescence & fast, milky blue cut with yellow ring.
6867-69'	Sandstone, as above, spotty fluorescence, bright blue fluorescence with fast, streaming milky-blue cut & yellow ring, porosity fair to poor.
6869-71'	Sandstone, as above, with fluorescence & cut, as above.
6871-73'	Limestone, as above, with fluorescence & cut, as above, white to white-grey, coarsely, Vuggy, with patchy brown oil stain.
6873-75'	Limestone, as above with stain & fluorescence, as above, with some brown, sucrosic limestone with black hydro-carbon (dead oil) stain in patches & with some blue fluor-escence & cut.
6875-83'	Dolomite, grey-white, coarsely sandy, grading into dolomitic sandstone, firm, with spotty, blue fluorescence with occasional stain with no cut.
6883-6885'	Shale, grey-black, waxy, with slickensiding, with some limestone, medium grey, sucrosic.
6885-87'	Sandstone, white, fine to medium grained, finely pyritic, calcareous, tite, slight trace fluorescence with no cut.
6887-89'	Dolomite, white, sandy, with trace porosity & patchy brown stain with milky cut.

6889-93' Dolomite, light brown, sandy, with fluorescence & stain & cut, as above.

6893-95' Dolomite, buff & light grey, argillaceous in part with patchy fluorescence & light brown stain & fluorescence, as above.

6895-97' Dolomite, light grey, very finely crystalline with good light blue fluorescence with no visible cut.

6897-99' Dolomite, as above, good fluorescence & milky cut with black waxy shale stringers.

6899-6901' Dolomite, coarsely crystalline, vuggy, with calcite lined vugs & with hairline fractures & with patchy black tarry-solid hydrocarbon with no fluorescence with slow yellow cut.

6901-03' Dolomite, as above, with some tan, finely sucrosic dolomite with fluorescence but no cut.

6903-05' Dolomite, dark brown, finely crystalline to sucrosic, dense, with no fluorescence with faint yellow cut.

6905-07' Dolomite, as above with patchy fluorescence & faint yellow cut.

6907-09' Shale, medium grey, dense, dolomitic, with patchy fluorescence & no cut.

6909-11 Shale, dark grey, dolomitic, grading into shaley dolomite with blue fluorescence & faint yellow ring on cut.

6911-15' Shale & dolomite, as above, with bright blue fluorescence & faint cut, finely pyritic in part, with patchy calcite zones.

6915-17' Dolomite, medium grey, dense with brown, fine grained sandstone with fluorescence & cut on fracture planes.

6917-19' Dolomite, medium brown, finely sucrosic, vuggy, fractured with patchy blue fluorescence.

6919-21' Dolomite, as above, with sandy patches with light brown stain with blue fluorescence, vuggy, with pin-point porosity & with patches of live brown oil stain with yellow-green fluorescence.

6921-23' Dolomite, light brown, finely sandy with patchy fluorescence & pin-point porosity.

6923-25' Dolomite, medium brown, sucrosic, dense, with some black tar & trace brown oil with no fluorescence.

CORE DESCRIPTIONS

Core No. 3: 4432-4492, Rec. 60.0'

4432-34'	Shale, red to green, slightly calcareous, few fractured, slightly pyritic slickensides with waxy coating.
4434-36'	Shale, green, with calcite coating, as above.
4436-38'	Shale, as above with increase in waxy material along fractures, slightly pyritic.
4438-40'	Shale, brown, horizontal fractures, abundant waxy material.
4440-42'	Shale, some dolomite, solid hydrocarbon along horizontal fractures, slickensides, few calcite stringers.
4442-44'	Shale, brown, abundant solid hydrocarbon along fractures, also some dolomite, very hard & dense with very fine sandstone stringers.
4444-46'	Shale, brown, as above.
4446-48'	Shale & Dolomite with solid waxy hydrocarbon along fracture planes, few calcite stringers, slightly calcareous.
4448-50'	Shale, brown, as above.
4450-52'	Shale, brown, with some coarse grained dolomite, slightly vuggy.
4452-54'	Anhydrite, white, translucent, with interbedded dolomite, light grey to dark grey, medium to coarse crystalline, slightly vuggy solid hydrocarbon on fracture planes.
4454-56'	Anhydrite, with some dolomite, as above, slickensides with solid hydrocarbon on fracture plane.
4456-58'	Anhydrite, dark grey, shiny, vitreous, with dolomite, as above, dark grey.
4458-60'	Shale, brown, with dolomite, some waxy hydrocarbon, slightly pyritic.
4460-62'	Dolomite, grey, waxy hydrocarbon on fracture, slightly pyritic, abundant calcite throughout, with some anhydrite, as above.
4462-64'	Dolomite, dark grey, abundant calcite, pyrite, slightly waxy.

4464-66'	Dolomite, grey, hard, finely crystalline, pyritic, few hairline fracturing.
4466-68'	Dolomite, dark grey, very finely crystalline, very hard, increase in pyrite, few calcite stringers.
4468-70'	Dolomite, as above, slight sulphur odor.
4470-72'	Dolomite, as above, some wax along horizontal fracture with slickensides, few calcite stringers, slight odor.
4472-74'	Dolomite, as above, few vugs to 3 mm with calcite crystallines, odor, coarser crystallines than above, waxy horizontal fractures with slickensides.
4474-76'	Dolomite, finely crystalline, dark grey, wax on horizontal fracture with slickensides, pyrite, slight odor.
4476-78'	Dolomite, medium crystallines, increase in calcite, slightly sandy, increase in porosity, increase in vugs, black solid hydrocarbon in fracture, yellow fluorescence, slight odor.
4478-80'	Dolomite, medium crystallines, increase in calcite, slightly sandy, increase in porosity, yellow fluorescence, slight odor, solid hydrocarbon in fracture, vuggy.
4480-82'	Dolomite, light brown to grey, medium crystallines, solid hydrocarbon in fractures, increase in calcite stringers, vuggy.
4482-84'	Dolomite, light tan, with abundant sand fragments, calcite fragments, solid hydrocarbon in fractures, pin point porosity, vuggy, slight odor, pyrite.
4484-86'	Sandy dolomite, light tan to grey, abundant vugs, slight odor, abundant calcite filled fractures, solid hydrocarbon in open vugs & fractures, pyrite.
4486-88'	Dolomite, grey, less sandy than above, abundant pyrite, pin point porosity, slight odor, vugs.
4488-90'	Dolomite, grey, very small vugs throughout, pyrite, slight odor, with increase in sand content.
4490-92'	Dolomite, grey, finely crystalline, abundant vugs, slight odor.

Core No. 4: Cored 4492-4504' Rec. 10.5

4492-94' Dolomite, white & light grey, finely sandy to dense, with vuggy & pin point porosity with open vugs. Patchy brown & black oil stain, rare, with zones of even, brown oil stain with yellow fluorescence & good cut & yellow ring, with slight gassy odor.

4494-96' Dolomite, tan, argillaceous with large, open vugs lined with black oil & with some brown oil with yellow fluorescence. Black tarry oil, common. Dolomite has some intergranular porosity & patches of white dolomite. Faint gassy odor.

4496-98' Dolomite, light grey, sucrosic, with patchy to well saturated black oil. Dolomite has white calcite patches. Good gassy odor. Dolomite has pin point to vuggy porosity.

4498-4500' Dolomite, light grey, dense, with some fine pin-point porosity, with black oil globules with good, gassy odor & dolomite, light brown, sucrosic, vuggy, finely pyritic, with vugs lined with clear calcite crystallines & fair odor. Vugs are open.

4500-4502' Dolomite, medium grey, shaley to sucrosic, with vuggy & pin point porosity with good gassy odor & patches of brown oil in sandy zones with yellow fluorescence & with some patches blue-white fluorescence with good yellow cut. Large milky chert, crystalline- & pyrite, common.

Core No. 5 - 4529-4589' Rec. 57½'

4529-30' Limestone, white, fine to coarsely sandy, with black tarry to solid hydrocarbon flecks, vuggy in part, with open vugs with partial filling of calcite crystallines & with pin point porosity; in part coarsely crystalline.

4530-32' Dolomite, white, finely crystalline, finely pyritic with good pin point porosity in part green-white.

4532-34' Dolomite, green & white, coarsely crystalline to granular, pyrite, vuggy with few patches brown oil stain & with tarry stringers & pods, rare & with white calcite pods. Thin stringers of dark grey crystalline dolomite, common.

4534-36'	Dolomite, medium grey, finely granular with thin, green stics & with flecks of black solid hydrocarbon.
4536-38'	Dolomite, green, shaley, with patchy brown oil stain, faint odor, bright & light yellow fluorescence, yellow cut. Pin point porosity, common.
4538-40'	Shale, green, dolomitic, with patches of shaley dolomite & with patches of pyrite.
4540-42'	Dolomite, green, shaley in part, coarsely granular, with pin point porosity with finely disseminated pyrite & with few pore spaces with black, liquid globules & calcite filled vugs.
4542-44'	Dolomite, grey, & white, with good pin point porosity, with patches of black tarry globules & with some solid hydrocarbon, in part sucrosic.
4544-46'	Dolomite, as above, shaley, with few patches brown oil stain with light yellow fluorescence, rare & with calcite vugs.
4546-48'	As above with increase in shale.
4548-50'	Dolomite, white, grey & green, with chert nodules, common.
4550-52'	Dolomite, white, with pin point porosity, shaley, with vugs, with calcite crystallines.
4552-54'	Dolomite, medium grey, dense, with streak of pyrite, in part vuggy, with vertical open fracture 6" long.
4554-56'	As above, very vuggy with horizontal & vertical fracturing.
4556-58'	Dolomite, shaley, pale green, with pelletal fragments finely pyritic with vertical, healed fracture.
4558-60'	Dolomite, finely crystalline, pale green-grey, pelletal, finely pyritic.
4560-4562'	Shale, dolomite, pelletal, with brown, red to elongated phosphatic pellets.
4562-64'	Dolomite, medium grey, lighographic.

4564-66'	Shale, green-grey, waxy, fissile in part.
4566-68'	Limestone, green-grey, shaley to pelletal, with fractures & pin point porosity with tarry black oil with fair odor on fracture plane.
4568-70'	Limestone, as above, brecciated, shaley in part, with white chert & with finely disseminated pyrite, finely crystalline in part.
4570-72'	As above.
4572-74'	Dolomite & Limestone, as above, finely pelletal, finley pyritic.
4574-76'	Dolomite, dark grey-black, lithographic, finely pyritic & shaley, with slickensided vertical fractures.
4576-78'	Dolomite, medium grey, with finely disseminated brown phosphatic nodules & with vertical calcite filled fractures.
4578-80'	Dolomite, medium grey, as above.
4580-82'	Sandstone, dark grey, fine to coarse grained, calcareous, hard, tite with brown shaley patches.
4582-84'	Sandstone, white, fine to coarse grained, poorly sorted, calcareous, tite, finely pyritic, with some large, frosted quartz grains. Vertical fracture filled with white calcite.
4584-87'	Sandstone, light grey, fine to medium grained, poorly sorted, calcareous, porous, appears wet; finely disseminated black hydrocarbon, solid to soft, on fracture plane.
4587-89'	Lost 2.0' t.